ON SCENE

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ON SCENE 3/92

Table of Contents

A Message from the Branch Chief
Letters to the Editor 1
New Staff in G-NRS 5
CAPT D. R. Freezer Retires 7
QE-II Grounding 8
Ice Rescue on Lake Erie 10
1991 SAR Planner of the Year Award Winners 12
SARMIS Data Requests 14
First District Hoaxes 15
HH-60J Rotorwash 18
Rescue and Survival Systems Notes 20
Latest Idea Express Adoptions 22
On Scene Commander SAR Exercise 25
Satellite Tracked Datum Marker Buoys 26
ISARC Project Acquires Satellite Receiving Station 28
CASP 1.0 2.0 30
Give Us Your SAR Input 31
Flare Case Prosecution and Flare Position Rapid Plotter 32
Flare Showers 36
Who Wrestles this Guy Anyway? 38
Get a Head Start 39
SARSAT System in Action 40
A "Cheap" Assist 42
Station Study Implementation Progress: SITREP TWO 43
UPDATE: 1993 SAR Conference 45
Que Pasa en Centroamerica 46
In Memory of 48
Search and Rescue Division 49

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RADM William J. Ecker
Chief, Office of Navigation Safety and Waterway Services

CAPT Michael F. Cowan
Chief, Search and Rescue Division

ENS Patrick J. St. John
Editor

COVER: (Top Left) HH-65 in the snow. (Top Right) Great Lakes Ice Skiff Ops. (Lower Left) CGC KATMAI BAY Great Lakes Icebreaker. (Lower Right) C-130 Hercules.

ON SCENE is a quarterly, authorized, special interest publication, produced by the Office of Navigation Safety and Waterway Services for members of the U.S. Coast Guard and the SAR community. Editorial content is not to be considered as authority for official action, nor as record material. Individual views and opinions expressed do not necessarily reflect those of the Department of Transportation or the U. S. Coast Guard.

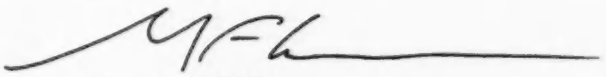
A Message From the Division Chief

I grew up on the Oregon coast a few miles upriver from USCG Station Umpqua River. That station replaced the isolated U. S. Lifesaving Service station where my father was born in 1897. My grandfather was a surfman in that parent agency to today's Coast Guard. Also, a great-uncle served over 32 years as the keeper of Cape Flattery Lighthouse for the U. S. Lighthouse Service, another CG forerunner. Several other relatives had extensive wartime and peacetime tours of duty, of varying duration, including full careers. I'm proud of my family's history of service in the Pacific Northwest. I'm even more proud of today's Coast Guard.

My top priorities are reinforcing and enhancing the service's position as a world leader in search and rescue and as America's leading boat professionals. The multi-mission shore units (and their 1,600 plus boats), small cutters, and aircraft are the heart of the Coast Guard's public image and political support. The ability of Coast Guard Regular, Reserve, and Auxiliary crews to deliver top-quality on-the-water assistance to the maritime public is the foundation of credibility and trust on which all service programs are supported.

I look forward to working with the many organizations that make up the SAR community here and abroad. I particularly look forward to meeting and hearing from the people out there doing the job every day. Nobody knows your job better than you do. Together we can make a positive difference in quality for our successors, for the mission, and most of all for "those in peril on the sea."

Sincerely,



M. F. COWAN
Captain, U.S. Coast Guard

Letters to the Editor

Dear On Scene Editor,

Your 1/92 publication was especially interesting. Many of our Auxiliarists operate boats equipped with outboard motors. Consequently BMC Doucette's article on the propeller problem will be carefully studied.

You might be interested in knowing how my Auxiliary boat, the KATHY J., a thirty foot, single engine, Maine lobster-yacht, equipped with a Sitex GPS (Global Positioning System) is assisting the Coast Guard.

Recently, on San Diego Bay SAR patrol, Group San Diego requested us to check a primary channel buoy which had been rammed by a ship and might be off station. The crew of the KATHY J. has developed a procedure to use GPS to check buoys when we are on Aids to Navigation patrols. Here is the system:

> To check a buoy we proceed to the nearest fixed landmark, determine its position from the chart, update the GPS to that position. We then proceed out to the buoy to obtain a reading, returning to the fixed mark to make certain that the GPS is still indicating the correct position.

The reason for this back and forth operation is that San Diego does not have Differential GPS; therefore, our civilian GPS might have up to 100 meter error. The problem is we understand that in addition to a regular degraded civilian accuracy, the GPS system randomly introduces additional errors. However, so far it seems to work quite well, probably giving us better than 16 meter accuracy. Another problem is that the light list positions and the San Diego Bay Chart use different datum points, so we have to correct for that situation. Nevertheless, the crew thinks that it is an improvement over trying to use horizontal sextant angles and a three-arm protractor on a thirty foot boat. Incidentally, the buoy in question was right on station and had minimum structural damage. It saved the local ATON personnel a special trip out to check the buoy!

The crew of the KATHY J. would appreciate any comments on our method from the Coast Guard GPS experts.

Tom McNiff
Flotilla 16-5, OPS Officer

Thanks for the nice words. We passed your letter to the Radionavigation Division (G-NRN) and the Short Range Aids to Navigation Division (G-NSR) for their review and comment. Look for a future article on GPS use in On Scene. *o/s*

Dear On Scene Editor,

A couple days ago, a few of the boatswain mates and I were talking marlinspike stuff and got on the subject of synthetic line snap back. Of course a automatic disagreement started on which line has the most violent snap back, three strand nylon or double braided nylon. Having my own opinion and choosing three stranded, I set out to find the answer to calm the masses. Making a few phone calls, I took a small survey from the members of the local jungle telegraph loop. My discovery was that more than 75 percent of the households polled came up with the incorrect answer (incorrect as I saw it).

On the research trail, I made more calls and hit the books. The Navy BM2/BM3 book has a good graph showing tattle tails and the critical stretch for several types and materials of line. The statistics for nylon show the critical stretch point of double braid to be 120 percent of its length. The critical stretch point of three strand is 140 percent of its length. This tells me that the velocity and energy developed by the three strand line returning to its original size after being stretched to 140 percent of its length makes it the most violent. If you're still skeptical you can test this theory with a rubber band. Stretch it to 120 percent of its original length and let go of one side. Then stretch it again to 140 percent of its length and do the same. The difference in the warm tingling sensation in your fingers should be a good indication of which one will hurt the most. On a side note, if either type line is stretched another ten percent further than its critical stretch point, it will part.

During this time we contacted the engineers at Sampson Rope and Cordage. We asked them their feelings on the subject. They stated that if you were to take two lines of each type (three strand and double braid) having the same breaking strength, placed them under load, the three strand will exhibit more force from parting due to the amount of stretch. If you were to take two lines of each type having the same circumference, placed them under load, the force would be about equal. This is due to the increased load capacity (breaking strength) of double braid. But, they recommend that no matter which one has the most violent snapback, they are both equally dangerous and when under extreme load should be watched and treated with caution.

BMC Dan Shipman
Station Chetco River, OR

Dear On Scene Editor,

I am an advocate of STAN teams, so my letter is not a slam against them. I just felt that by them saying group engineers should train station engineers, this idea would become gospel to those who read it. I think that making group engineers responsible for training is a band aid. The real problem is unqualified EPOs being assigned. That requires a different solution.

W. Bannister
G-CPP

Dear On Scene Editor,

Having had to live with the outdated and sometimes useless equipment installed on our MLB's (i.e. the Direction Finder), I was pleased beyond words when I took a tour of the 47 ft. MLB Prototype and got a demonstration of the Furuno radar on board.

The ability to track multiple contacts, utilize on screen chart overlays, lay out search patterns on the radar screen and then track boat progress on the screen, were features which I had seen on several of the fishing vessels that I went on board and could only dream of someday becoming available to the Coast Guard small boat community.

It appeared that the day we finally caught up with available technology was finally here. As it turns out, rather than obtaining an outstanding, full feature radar like the Furuno installed on the 47' prototype, we have opted for the Raytheon R41X which has a smaller screen, lower resolution, half the features offered by the Furuno, and according to a Raytheon salesman, isn't even designed for commercial use.

It is a shame that the men and women of the small boat community, who consistently give their all, can't have access to the best equipment available. Isn't this inconsistent with Total Quality Management. I can only hope that this trend will someday turn. We are off to a good start with the new MLB. Now, if only we could outfit it with the best there is.

Lars B. Kent, BM1

We recognize that the Furuno 1510D RADAR (as installed on the prototype 47'MLB), or an equivalent radar, has additional features not found on the R41X. The Raytheon 41X was selected as our Standard Small radar through a competitive cost/ feature

proposal process based upon a Sponsor's Requirement Document (SRD) prepared in 1988. In addition to meeting operational requirements, the SRD specified a need for a radar that was: rugged, weather proof, relatively inexpensive, easy to repair in "standard" boats, and available "off the shelf." The Raytheon 41X best met all of these requirements and offered capability equal to our minimum operational needs. With regard to the 47' MLBs, we will further evaluate how well the Raytheon 41X adequately complements the vessels' capabilities and mission needs. ols

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Dear On Scene Editor,

With the coming of the 47' MLB, questions have emerged from all over the Coast Guard, concerning everything from hull strength to towing capabilities and electronics to crew standards. If you go to any small boat station that has a 44' MLB attached, you will undoubtedly be asked about maintenance, which I am sure was one of the many factors put into the 47' project as a whole. More than likely, this question will lead into "Will this boat be painted?" the question may come from anyone, from E-2's to E-9's, that have spent endless hours on projects requiring very tedious work, yet demanding near perfect results.

I have spent my last 8 years at stations, two of them having haul-out facilities. I have also been involved with numerous yard periods for MLB's and SRB's. The point here is, it was such a relief to see the SRB in the yards, rather than the MLB, because of what? It's obvious: less maintenance is required "overall" on the SRB than on the MLB.

My statements bring me to this: why is the Coast Guard, at this stage of the project, even considering painting the 47' MLB? After all, the Coast Guard is trying to thrust itself into the future, (the basic reason for the 47' MLB) and the first thought is automatic, "Paint it! Why?" "Because we always do!" I think it is the wrong way to approach this subject. Since this boat has been, and will be, evaluated for sometime, why don't we have a 5 year program to see how the boat fares, and how the public reacts.

I have been in the Coast Guard for 12 years, (8 years at stations) which is a short time when compared to most of my senior Boatswains Mates and Machinery Technicians. I didn't like when computers came out, and I ignored them whenever possible. Now they are a way of life at most units, and I do my best to learn about them and use them as much as possible. They do make things easier. I didn't like when DES radios came out. Guess what? I adapted just fine. And I'll never forget the first time I heard the concept of aluminum being put together so as to be as strong as 3/16" Corten steel... it just couldn't be, but here we are again, technology over stubbornness and once again I have accepted the facts. Is there someone, somewhere in the Coast Guard that can't adapt the way the rest of us have or are trying to? Is someone saying "no" because we "always do things this way?" If so, what kind of future does this person bring the Coast Guard by not at least trying the basic "no paint" concept. Let's not go by one judgement. Let's see what OinC/CO's conferences bring up, or maybe TQM the idea. If you start painting on the production line, you are stuck from there on out.

In closing I would like to mention that I am looking forward to the 44' MLB replacement and that this writing is my opinion, but I think it is one shared by many.

BM1 D.P. Caton
Station Chatham, MA

Endorsement to BM1 D.P. Caton's letter,

Though an endorsement is not necessary for this letter, I felt it necessary to indicate my support. I have been in the Coast Guard for 26 years and a Boatswains Mate for 24 years. In this, I am most definitely a traditionalist and not easily swayed to "NEW IS ALWAYS BETTER." That said, I submit I have seen the Coast Guard go through many productive and nonproductive evolutions. More often than not we (the Coast Guard) often chose the nonproductive evolution first. I feel we have an opportunity to avoid painting this vessel and hopefully we will, vice, painting and then issuing a Boat Alt in the future to remove the paint and evaluate the obvious concept first. Let's have a vision now, seize the moment, saving time and money....a small step in efficiency, a giant step in productivity.

J. E. Downey, OinC, Station Chatham

The success of our 44' MLB Replacement Project requires not only proving to ourselves that this project is worthwhile. We must also "sell" our Department, our Congress, and the public we serve on the idea. Within the Coast Guard, we now believe that the 47' MLB is a viable replacement for our old tired 44' MLBs. We also believe that the 47' MLB offers good value to the public that must ultimately pay for it. However, please remember that at this stage of the project we are only building five pre-production boats for further operational testing and evaluation (OT &

E). To go on to a full production contract, we may need all the good advertising we can get. The decision to paint the first five pre-production boats, in like fashion to other Coast Guard small boats, makes an implied endorsement of our confidence in these boats to serve the public in the same tradition as our other vessels. During OT & E, we will tally the additional labor and fiscal costs resulting from this decision. We are not really closed-minded to new ideas. We are just very proud of our Coast Guard traditions and want them reflected in our new 47 MLB which, by its shape and lines alone, is hardly traditional. o/s

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Dear On Scene Editor,

There are quite a few of us that use the Weems and Plath parallel plotter. It sure has made our lives a lot easier than the old triangle method or the parallel rules.

Where would we be without the plexiglass covering our charts to save the wear and tear that Group SAR planners or small boat crews put them through? Somehow the two of them just don't seem to mix. The first time you try to plot a LOP on the plexiglass with the Weems, off its skates.

There is a solution. What if the Weems & Plath had rubber wheels? Well it can. Our "prototype" uses two 3/32 x 3/8 rubber "O" rings. It only takes a few seconds but sure has made life in New Haven a lot easier.

BM2 Bill Anderson, Station New Haven
QM2 Steve Carney, Group Long Island Sound

We think they mean "roller plotter" instead of "parallel plotter." They're right, though. With the "rubber tires" it now "holds course" as it rolls off the chart table in sloppy seas. o/s

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Dear On Scene Editor,

In the article on towing with outboards in the 1/92 issue, an equation was given which yields a "Power Rating" for propellers. The equation was 2D+P=Power Factor. I believe this equation underrates the influence of diameter. Just as the later equation for speed evaluates the forward motion (before slip) of the blades through a "Solid Fluid," so the power factor should relate to the volume of "Solid Fluid" traversed in one revolution. This would be measured by the equation

$$(\pi D^2/4)xP,$$

measured in cubic inches of fluid "pumped" by one revolution of the shaft (slip again ignored). I have successfully applied this equation in setting the pitch on my adjustable pitch propeller on my diesel powered sailboat. With the throttle wide open, my engine rpm tops out just below the manufacturer's 15 min. rpm rating!

Allen R. Perkins USCGAUX

You are correct! However the article was written to present the "Power Rating" in a more easily understandable format (less detail). o/s

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Dear On Scene Editor,

I read with interest the recent Lifeboat issue of On Scene. There is a notable omission in the "Forty-fours around the Coast Guard" article. The crew of USCGC POINT LEDGE in Fort Bragg, CA also mans the MLB 44371.

This unique 18 man crew maintains a constant B2 resource at the Noyo River Moorings, and responds to 150-200 SAR incidents per year.

Fort Bragg is a small isolated community nestled on the North Coast 150 miles north of San Francisco and 80 miles south of Eureka. The crew stationed there is the only Coast Guard presence for a long stretch of the California coast from Point Arena to Cape Mendocino.

I am sure that you at On Scene would not want the efforts of these fine Motor Lifeboatmen to go unnoticed.

CWO2 K. D. Stuber

Oops! We also forgot Station Jones Beach. A mistake which no reader found was the material for the 47' hull. Sorry about that! o/s

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ON SCENE seeks letters to the editor and will gladly publish them. Some rules do apply though.

1) The author's name, address, and telephone number must accompany letter.

2) If requested, the authors name will be withheld, but anonymous letters will not be considered.

3) ON SCENE has the right to edit all letters for taste, grammar, and length.

New Staff in G-NRS

CAPT M. F. Cowan, G-NRS

The new Search and Rescue Division Chief arrived this summer after recently commanding Group Galveston, Texas. He has also been Commander, Group Key West, Florida. Both commands were recognized for fishery, anti-drug law enforcement, and aids to navigation achievements, while conducting over 10,000 SAR cases during his tours.
CAPT Cowan was part of the original Atlantic Area computer SAR development team in the mid-seventies. He then led the SAR management information staff at CG Headquarters and directed a rewrite of the SAR Resource Simulation (SARSIM) computer planning model. He also has extensive small boat training, field unit support, and planning experience at the district and Headquarters level.

CDR B. J. Stoppe, G-NRSa

The Assistant Division Chief arrived in early August to start his third CGHQ tour. CDR Stoppe's previous assignment was as Aviation Engineering Officer, CG Air Station Barbers Point, Hawaii. He has been stationed at three Air Stations, flying nearly 3,500 accident free hours as an Aircraft Commander in the H-3, H-52, and most recently, the H-65 helicopter. CDR Stoppe has frequently dealt with the station/group community and has a sincere respect for what the community does for the typical CG customer.

CDR Stoppe's other HQ tours have been in the Aeronautical Engineering Division (G-EAE) working Avionics issues as both a staff officer and Avionics Branch Chief.

In addition to being a CG Academy graduate, CDR Stoppe earned both a B.S.E. and M.S.E. in electrical engineering from the University of Michigan.

CDR Stoppe looks forward to working within the Search and Rescue Program from a different prospective than a helicopter cockpit.

LCDR S. H. White, G-NRS-1

Hello there! Now that the summer transfer season is over, and after a fast two months at Headquarters (whew!), I'd like to introduce myself and give an update on the Systems Section of the Program Branch. My CG background spans more than 16 years. Past assignments include: CG Air Stations Cape May and Brooklyn (enlisted AT), OPS Officer at the Omega Navigation Systems Center, Chief, IRM Section/Networks at the CG YARD, CO LORAN Station Attu, Alaska, and tours in HQ and Ninth District office. I am currently filling a brand new billet designed to expand and improve coverage of computer issues impacting the SAR Program. This new billet will enable the SAR Program to better plan long term SAR/IRM objectives and goals.

As I said earlier, the Systems Section supports and handles IRM matters and initiatives for the SAR Program. We also have many dedicated helpers in the wings (OpSysCen, R&D Center, EECEN, ISC). We're all here to support you! We're also working to combine our experience, talents, enthusiasm and visions to achieve effective and lasting improvements to the SAR information systems, as well as the design of future systems. We need your help to best understand the problems that must be addressed. Together, we'll implement effective change in SAR information systems that will best meet both your needs and SAR Program objectives and goals. I'm excited about my assignment and look forward to meeting many of you in the months ahead.

LCDR D. G. Streyle, G-N Liaison, OpSysCen Martinsburg

LCDR Dale Streyle is also new. He is filling a billet as G-N's on-site liaison at the Operations Systems Center in Martinsburg, West Virginia. LCDR Streyle is a key player in the SAR Program support arena (IRM viewpoint). From his desk, LCDR Streyle provides technical support and interacts directly with the field and the OpSysCen's Commanding Officer and staff to ensure reliable and effective day-to-day performance of the SAR Program information systems housed and operated there (AMVER & CASP). LCDR Streyle also manages contract SAR/ADP support service requests and assists Headquarters (G-NRS) planning for future system development.

LCDR G. E. Hensley, G-NRS-3

I've been caught! Some how I've been transferred to the SARSAT program and ended up in Headquarters. This is a major change from flying HU25 Guardians. As an ex-aviator I am surprised, overwhelmed, and excited about my new position here in NRS. I arrived here from CG Aviation Training Center Mobile, Alabama and I have a engineering background. Therefore, I will have to start from square one. So, if you can, send the rescue forces.

The SARSAT program has a major impact for all our rescues. If we can convince the boating public to purchase and register 406 EPIRBs we can take the ***SEARCH*** out of Search and Rescue. I look forward to working with and hearing from you. Now all I have to do is put on the oxygen mask and find the throttles and flaps on my computer keyboard!

LT R. C. Patton III, G-NRS-1

Since reporting to G-NRS-1 Information Resources Management/Systems Section in August, LT Bob Patton has been involved with the Operations Information System project, CASP 2.0 development, WPB Replacement Project, AMVER II, and SARMIS. LT Patton is a 1985 Graduate of the Coast Guard Academy. His first tour was on board the 180 ft. seagoing buoy tender SALVIA, homeported in Mobile, Alabama, where he served as Operations Officer. LT Patton next served two years as Commanding Officer of the 82 ft. Patrol Boat POINT ESTERO homeported in Gulfport, MS. For the past three years, LT Patton has been at the First District Office as an OPCEN controller for two years and the Cutter/Aircraft Program Manager for one year. His broad operational experience makes him a valuable member of the SAR Program.

ENS. P. J. St. John, G-NRS-2

New Editor of "ON SCENE" magazine!

After extensive training shining my belt buckle, my first billet out of OCS is editor of ON SCENE magazine. I am relieving LTJG Szrama who has moved on to Group Mobile, AL.

As editor of ON SCENE, I am charged with editing and formatting articles for the magazine and providing the readers an opportunity to express their valued opinions and concerns via "Letters To The Editor." The position promises to be challenging and an excellent introduction to the Coast Guard.

CAPT D. R. FREEZER RETIRES

It was a cold windy June day when Captain *Denny* Freezer's mother and father came to pick up their son. It was 30 years prior to that day when they left him at the door steps of the Coast Guard Academy. After serving a tour on the CGC CASCO a young LTJG Freezer saw the light and decided to become an aviator. He was then sent to a sunny Air Station in San Diego, California after putting on his wings in Pensacola, Florida. After his tour in San Diego, he attended the University of Michigan for a Masters Degree in Avionics Engineering. His next tours included Aircraft Repair and Supply Center Elizabeth City, NC, Headquarters, Air Stations Borinquen, PR, Astoria, OR, and New Orleans, LA. To finish as the Chief of the Search and Rescue Division was a nice touch to a diversified career.

Captain Freezer plans to stay in the Washington D.C. area and have his wife support him in the means he is accustomed to before pursuing an unknown second career. He will be missed here in G-NRS and we all wish him the best of luck.

VADM Robert T. Nelson presenting CAPT Dennis R. Freezer the Meritorious Service Medal

QE-II Grounding

By: LT M. S. Sabellico, D1 OPCEN Controller

It was an eerily quiet Saturday night and all my paperwork had been completed. I just settled down to watch "Terminator II" when the phone rang. My brother from RCC Honolulu was calling to ask some questions about D1's CASP training program. As I was explaining our training program, another phone line rang, so I put my brother on hold. The other call was from the Group Long Island Sound Duty Officer. He asked me if I knew that the QUEEN ELIZABETH II (QE II) had just run aground in Group Woods Hole, MA Area of Responsibility (AOR). I told him I did not and immediately hung up with him. I returned to the line my brother was on, I told him "I had to go, this is going to be a long night, the cruise ship QE II had just ran aground with 2800 crew and passengers aboard."

I thought Woods Hole was probably very busy attempting to get information on the incident and that I would wait for their call. Woods Hole called about 30 seconds after I hung up with my brother. They requested a WPB and aircraft support for the incident. The extent of the situation was unknown We did know that there were approximately 2800 passengers and crew aboard and if the ship sank the potential for a huge loss of life existed.

I immediately chopped CGC BITTERSWEET, CGC JEFFERSON ISLAND, and a HH60 from Air Station Cape Cod to Group Woods Hole for the case. Several 41 ft. utility boats from the Group were on their way to the scene. After the immediate action was initiated, we were able to get some solid information from the master of the QE II.

Apparently, the ship had grounded and freed itself. The vessel dropped anchor, then immediately called the Coast Guard. The master stated that the vessel was not in immediate danger, but the extent of the damage was unknown. He also reported the smell of fuel in the vicinity. Marine Safety Office Providence, RI was notified of a possible fuel leak from the QE-II. The Captain of the Port directed CGC BITTERSWEET to transport as much absorbent boom to the scene as they could.

At this point, my job in the operations center shifted from ensuring proper initial response to ensuring that the SMC for the SAR case and the On Scene Coordinator for the pollution case worked together and to provide a smooth flow of information to all concerned parties. In between the calls to Coast Guard units, the press had gotten wind of the accident and were calling for information. We called in two extra personnel just to handle the press calls.

The next morning the situation was under control and operations were running smoothly (8 hrs. later). Group Woods Hole was lining up the transfer of the passengers to Newport, RI with the assistance of the cruise line (Cunard). Marine Safety Detachment Cape Cod representatives on board the QE II were evaluating the damage to the vessel and had coordinated with local divers to survey the underwater hull. An investigating officer had been assigned for the incident, which was receiving intense media interest. At this point I was relieved of the watch by the oncoming controller and my involvement in the case ended.

As one of the most inexperienced controllers in the operations center, it was very exciting to be part of the Coast Guard's response to this marine mishap. I don't think the knowledge gained at SAR School prepared me for this incident. The long break-in period, combined with the willing attitude of the more experienced controllers, enabled me to successfully prosecute this case. Overall the Coast Guard's performance throughout the incident was outstanding.

We had units on scene minutes after the incident occurred, assisted in the passenger transfer, and ensured that the environmental damage done by the spilled fuel was minimal. Finally, due to our efforts, we were seen in the public eye as the effective and professional service we strive to be. *o/s*

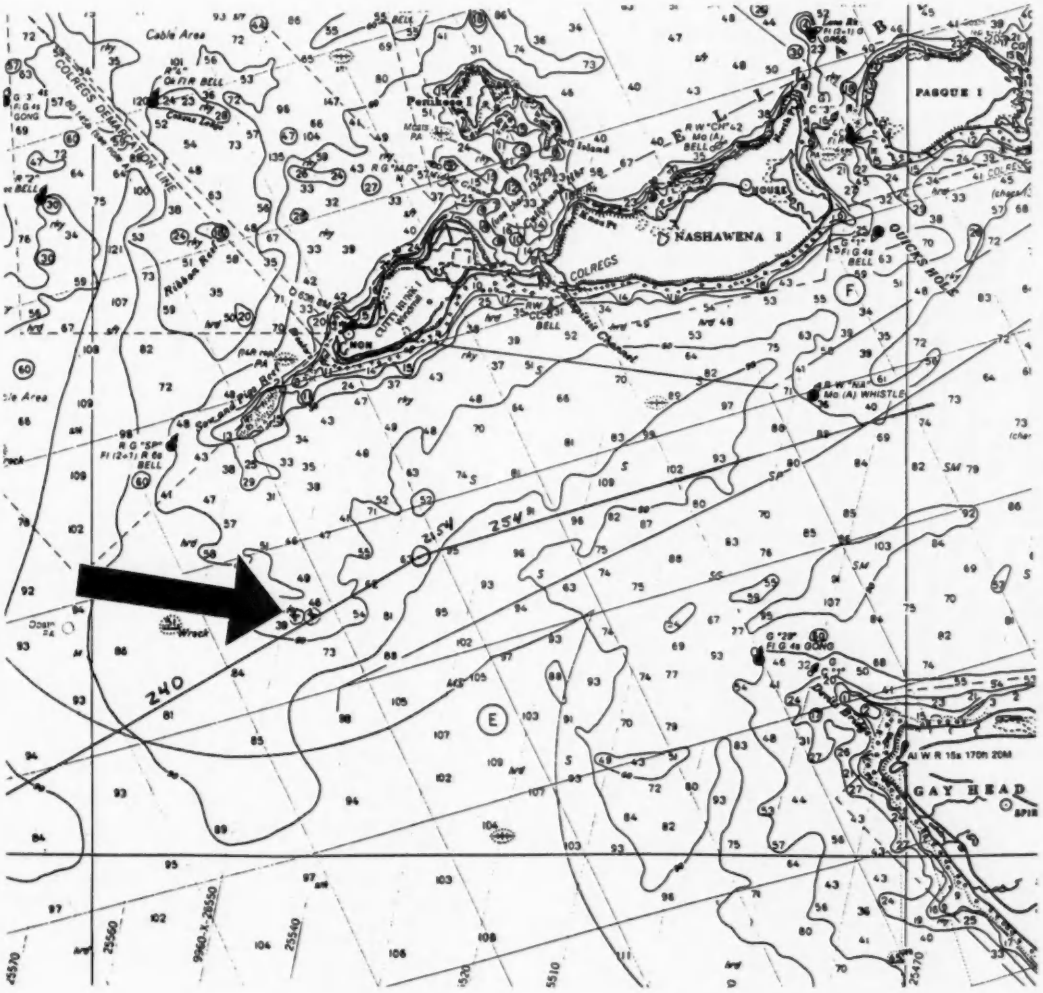


Illustration of intended trackline and location of rocks found to have the hull paint of the QEII.

Ice Rescue on Lake Erie

By: BMC J. Kearns, Station Rochester

This is based on an operations summary for Station Cleveland, OH. Unit Case Number (UCN)-046// kids trapped on ice floe, Lake Erie, 15 Feb 1992.

This summary is provided for information as discussed at the 9th district 1991 OinC conference: actual case debriefing information may better assist the formation of better rescue plans and improve current methods.

SUMMARY

Information was received that two small children were adrift on small ice floes in Lake Erie. At the time of report, they were 100 yards offshore, moving away from shore with the wind.

Weather Conditions: SEAS: CALM//AIR TEMP 48°F// WATER 33°F// WINDS 20 Kts// VISIBILITY 1NM DECREASING WITH HEAVY RAIN// WIND CHILL 10°F// ON SCENE AIR TEMP OVER WATER /ICE 34°F

The Ninth District uses 14ft. aluminum skiffs for ice rescues when the waterways are frozen. Though use of helicopters may be more effective, weather, distance to scene, and other factors come into play, necessitating the use of open boats. A vehicle with the ice skiff in tow, a 3 person boat crew, and one observer departed for the scene. Communications were established with the Station and Group controller via VHF-FM channel 21A. Additional communications equipment included 2 portable radios and a cellular phone. The scene was 11 miles from the station, 10 miles of highway and one mile of city traffic. Emergency vehicle lights and siren were used during the drive, but speed was not excessive due to hauling a skiff. It took 16 minutes to reach the scene driving from the Station. Enroute the scene, communications with the Group Controller verified that no helo could launch, and the rescue was to be carried out by Station resources.

The nearest the crew could drive to scene was on top a bluff overlooking the lake. No ramps or vehicle access were available for launching. Offshore ice fields would have prevented any quick response by a UTB and would have hampered a MLB. Because of the rough terrain, steep cliff, and a steep shoreline barrier of uneven ice packs, an air cushion vehicle or an all terrain vehicle would not have worked. The boat crew physically carried the skiff to the edge, down cliffs to the shoreline ice barrier. Transit was hampered by the heavy rains, deep mud, and frozen ice patches. Upon reaching the ice barrier, the skiff was lifted to the top with the assistance of onlookers. Once on top, the crew was confronted with a ice build up, angled down toward the waters edge, making the last 20 feet dangerous. The boat was placed in the water, the engine was installed and preparations were made to get underway.

(NOTE) Due to the conditions, by the time they reached the water, the entire crew was exhausted from the extreme effort put forth reaching the shoreline. Overheating was apparent in the crew members wearing the immersion suits and in the crew member wearing a "Mustang." Since there was open water, the need for mobility, and no over ice transits were required, a Mustang suit was still within the [then current] guidelines for safety.

On scene, EMS was in the process of launching a 12 ft. canoe to attempt the rescue. At the Station's suggestion, EMS waited to launch in order to

coordinate with the Coast Guard. After a safety line was attached to the canoe, the CG and EMS launched together. The CG directed the canoe to go to the near-shore victim (100 yds. offshore) while the more capable CG boat pursued the victim on the floe being blown offshore by the 20 kt wind. Due to high wind, and the fact the EMS team did not have any PFD's or protective gear, we recommended that the EMS canoe proceed to the victim and await arrival of a second boatcrew. The CG on scene recommended they not launch at all, having no PFD's or protective gear. We feared this could add victims in the event of the canoe capsizing.

The CG ice skiff was chasing the floe with the child, which continued to be blown further offshore. The victim had a lead of 150 to 175 yards at the time of launch. The child was distraught and screaming for help. The ice floe was small in appearance about 10' x 12' and among several other ice floes. The child was in the center huddled in a kneeling position. The near-shore victim was in fairly open water with few surrounding ice floes. Problems installing and starting the engine were encountered. The problems: being dressed in the cumbersome immersion suits caused the inability to properly insert the fuel hookup, difficulty in working the choke, and pull starting while physically exhausted. The oversized three fingered gloves prevented the proper insertion of the fuel hookup, removal of gloves by the coxswain wearing the "mustang" suit was necessary to accomplish this task. Once in the water, the oars were installed and the boat was making way toward the offshore victim. Because of the heavy rains, the victim being blown away from shore, and the starting problems, we felt that any distance closed by rowing would better the chances of saving the victim if he went in the water. Because of fatigue, rowing was done in shifts while another member tried to start the engine.

It was reported that the victim was wet from having fallen in earlier, so hypothermia was a great concern. On scene air temperature at waters edge was 34°F. The wind chill for 20 Kts/34°F is estimated at 10°F. With the offshore wind pushing the skiff, the crew reached the victim in 6 minutes. It took additional time moving the surrounding floes with boat oars and boat hooks. The size and instability of the floe required a cautious approach. We told the victim not to move and reassured him we would save him (if he moved from the center, the edge would start to submerge, increasing his chances of falling in). For safety we passed a heaving line to the victim and instructed him to tie it around himself. This would act as a safeguard if he fell in. We positioned a rescue swimmer for a stern entry in the event the victim could not swim because of diminished physical condition. Once the line was safely attached, we shifted the weight to the rear of the boat, and with the bow high, we rode up on the floe, picked up the victim and brought him safely into the skiff. The victim was cold, shivering and appeared to be in mild shock. The crew took steps to treat for hypothermia while returning to shore. Rowing against the wind, it took 9 minutes to reach shore where the victim was turned over to EMS.

Though the entire rescue took less than 30 minutes, the evolution demanded great physical effort by the entire crew. Once reaching shore and turning the victim over to EMS, the crew members experienced nausea, cramps, and dizziness from overheating and fatigue.

Additional training will be conduct to see if wearing of an immersion suit actually hampers the starting of engine. There was no other place to launch a skiff or other effective resources to recover the victims. It is believed that a helo would have displaced or even blown the victims off the ice floes.

The Coast Guard was the only agency prepared with a boat, PFD's, and water rescue gear. The OinC discussed with the Fire Chief the potential hazards of launching the canoe having no PFD's or other survival gear for the crew. The Fire Chief will reaffirm to members the danger of this action.

In the future, if personnel are available, additional members will be sent to set up and launch the boat so the crew will not be operating in a fatigued state or suffering from heat exhaustion.

In cases like this, direct comms via high-level site and cellular phones are the best possible means of communications. The OinC or XPO will always be on scene during a winter rescue.

Dedication and professionalism displayed throughout the case, showed a positive image to other agencies, onlookers, and media. The crew members were very pleased with the civilian response to rescue efforts, onlookers were actually cheering the boat crew on. *o/s*

Editors Note: Units should consider procuring boat crew dry suits as per the Rescue and Survival Systems Manual (Comdtinst 10470.10C) for these ice rescues.

1991
SAR PLANNER OF THE YEAR AWARD WINNERS

By: Mr. R. R. Schaefer, G-NRS-1

Group Controller of the Year Award
Group Honolulu Operations Center
Overdue P/C DORI ANNE II

Accepting the Group Controller of the Year Award on behalf of the Group Honolulu OPCEN are QMC S. R. Hamilton, left, and LT C. J. Olin, flanking RADM Ecker (G-N).

RCC Controller of the Year Award
Seventh Coast Guard District Operations Center
Ditched Aerocommander N3840C

Accepting the RCC Controller of the Year Award on behalf of the 7th District OPCEN are LT M.E. Miller, second from the left, and RD2 D.R. Befort, third from the left. They are flanked by CAPT Hamilton, (D7(osr)) and RADM Ecker (G-N).

The second annual presentation of the awards for SAR planning were made on 1 April 1992 during the spring Search and Rescue Conference in Alexandria, Virginia. The winners were OPCEN teams again this year. They are:

RCC Award – 7th District Operations Center

LT M. E. Miller, LT R. E. Kane,
LT A. L. Burkhardt, QM1 R. J. Gay,
QM1 P. S. Niles, RD2 Befort, RD2 J. E. Rivera.

Group Award – Group Honolulu OPCEN

LT C.J. Olin, LTJG J.T. Thomas,
LTJG J.E. Malene, QMC S.R. Hamilton,
RM1 C.A. Tomson, BM1 S.D. Williams,
QM3 C.G. Lewis, RD3 S.J. Salvati,
BM3 D.L. Kerschner

The winners were chosen from a field of 10 district nominees and 5 group nominees for SAR planning actions in 1991. The selections were made by a committee comprised of representatives from the Headquarters Search and Rescue Division, Headquarters Flagplot, and the National Search and Rescue School. RADM W. J. Ecker, Chief, Office of Navigation Safety and Waterway Services presented the awards. Each award included a citation, plaque, and high quality plotting kit.

RCC Award

At 042130Q August 1991 the twin engine aerocommander N3840C, on a flight from Walker's Cay, Bahamas to West Palm Beach, FL with four people on board including a 14 year old boy, radioed a Mayday. The aircraft reported a loss of engine power about 40 NM east of West Palm Beach at an altitude of 4700 ft. Stuart Tower, FL, the only tower

to copy the Mayday, alerted RCC Miami. The SAR controller at RCC Miami immediately diverted all available units and commenced planning an extensive multi-unit search.

Determining datum was difficult. No station had copied any further communications from the distressed aircraft, and the aircraft was beneath or beyond any effective radar coverage. Through extensive investigative work, the geographic position of the distress call was corroborated by departure time, aircraft speed, intended track, and the aircraft's report that land was in sight. Aircraft drift/glide was determined after consulting with pilots familiar with the aircraft, and datum was determined to be a 25 N.M. radius around the reported Mayday position. An initial comprehensive multi-unit search plan was developed and executed using two HU-25s, two HH-65s, and a WPB. The first search unit was on scene within minutes of the distress call, and the search continued well into the night. The initial search covered almost 100 sq. NM with no sightings of the aircraft or survivors.

Developing a 5 and 6 August search plan was extremely difficult due to datum drifting at up to four knots along the very unpredictable Gulf Stream, and people in the water without signaling devices as search targets. With the use of CASP, DMB, NOAA Gulf Stream Data, on scene weather, common sense and experience, the drift characteristics of people in the water were estimated. The search planning was further complicated due to numerous civilian aircraft and boats arranged by the survivors' families to assist in the search. Although the additional civilian aircraft were welcome search units, their "free lance" search efforts posed a very hazardous situation for USCG and DOD aircraft. In planning the Bravo searches, Miami RCC provided the eight volunteer civilian aircraft with search areas, and further requested they report in with the on scene commander. By the end of the second day, three HH-3s, two HH-65s, two C-130s, two HU-25s, two WPBs, eight civilian aircraft and numerous civilian surface units had searched almost 6000 Sq. NM with no significant sightings. Another massive effort, employing USCG air and surface assets, USAF air assets and twenty volunteer aircraft, covering almost 9000 Sq. NM, was planned for 6 August. The detailed search plan contained an innovative grid system for the twenty civilian aircraft. The large grid contained designated search areas and was outside the USCG and USAF search areas. Survivors' families were briefed on the search plan and were requested to provide a civilian aircraft coordinator who in turn was tasked to assign the designated search areas within the grid. This system worked extremely well and provided safe search conditions. At 061457Q August 1991, CG 2136 sighted the survivors in Mae-Wests 60 NM east of Cape Canaveral, FL. Minutes later CG 1437 recovered the survivors and delivered them to Patrick AFB for medical evaluation/assistance. From the debrief of the survivors, it was determined the aircraft had crashed within a mile of datum and the survivors were overflown several times during the search. The survivors had drifted almost 100 NM before being rescued. As a direct result of the persistent and ingenious efforts put forth in planning this extensive multi-unit search plan, four lives were saved. Clearly the difficulty of planning such a search is evident in the cumulative probability of success for this case, estimated at less than 25%.

Group Award

The DORI ANNE II departed Hawaii Kai, Oahu, Hawaii, on the afternoon of 26 January, with two persons on board for an overnight fishing trip to Penguin Bank, 22 nautical miles southeast of Oahu. The DORI ANNE II failed to return. Group Honolulu quickly responded to the report of the overdue pleasure craft by conducting extended communications and harbor checks. After the vehicle and trailer were located at Hawaii Kai and the overdue confirmed, an Urgent Marine Information Broadcast was issued. The SAR controller on watch immediately began planning for a first light search. Because more than a day had passed and the case would involve a multi-unit open ocean search, Group Honolulu requested that Joint Rescue Coordination Center (JRCC) Honolulu assume SAR Mission Coordinator (SMC). The JRCC directed the Group to retain SMC. The experience and training required for this level of search called for the Group Operations Officer, LT Olin, and the senior watchstander, QMC Hamilton to be the primary planners for the case.

On the first day of the search, realizing the complex currents around the islands, the group SAR controller directed datum marker buoys to be inserted in the search area around Penguin Bank. This proved vitally important in planning searches in the following days. After the initial search of the DORI ANNE II's planned operating area on the morning of 28 January with no sightings, expanded search areas for the afternoon were planned and searched. Early that afternoon the capsized hull of the DORI ANNE II was located by a Coast Guard

C-130. There were no signs of the two missing persons. During the next three days, the controllers developed six Search Action Plans, with 41 separate search areas looking for the two missing persons. Group Honolulu planned and coordinated the search efforts using Coast Guard, Marine Corps, Hawaii Air National Guard, Hawaii Civil Air Patrol, six local civil agencies and volunteer resources.

Throughout the searches, flotsam from the DORI ANNE II was found, showing that the areas being searched were following the drift and were most likely the area where the two persons would be. Early on 31 January 1991, the JRCC assumed the SMC for the search effort. Although no survivors were located, the intensity and exhaustive search planning by the Group Honolulu OPCEN personnel was exemplary.

*** Nominations for actions taken place in 1992 are due to G-NRS-1 by 31 January 1993.** *o/s*

SARMIS DATA REQUESTS

By: Ms. Sue Holden, G-NRS-1

SAR STATISTICS - Many of you have asked us what are the procedures for getting specific information about your unit out of SARMIS. A simple rapidraft or letter signed by the CO or OinC is all you need. The letter should be directed to Commandant (G-NRS-1), outlining your request in detail. Please include a name and phone number in case I have questions concerning your request. If you are not sure I can provide what you need, give me a call at 202-267-1089. I can be reached from 7 A.M. to 3:30 P.M. EST. The SARMIS database for Fiscal Years 1980 - 1991 is complete.

Closure of the 1992 SARMIS database is in progress. The completed 1992 SARMIS database will be available for analysis of unit statistics and density plots during the spring of 1993.

Please allow a reasonable amount of time for me to respond to your request. Typically, one to two weeks is all that's required. However, don't ask for 50+ density plots with a one week turn around time. In generating your requests, ask yourself, "Will I really look at all of the data I'm asking for?" If your answer is you're not sure, and you are uncertain as to how best to depict the data, again please call me for assistance. I would rather spend 15 minutes to clarify your specific needs, than proceed with developing density plots that may be unreasonable or worse, not usable to you.

SPECIAL REQUEST FROM ME: Earlier this year I requested each of the district staffs to keep an eye out for action photos for inclusion in the 1992 SAR Statistics. With the catastrophic damage done by typhoons and hurricanes this year many of you may have personal photos, slides, or negatives that could be used. Please forward them to me with a short narrative about the photo. A credit for the photo will be mentioned if provided.

NOTE: Private citizens seeking SAR information should be directed to forward their requests under the Freedom of Information Act. Procedures for submitting these requests are contained in the Privacy and Freedom of Information Acts Manual (COMDTINST M5260.2). *o/s*

First District Hoaxes

By: LCDR W. C. Glidden, CCGD1 (dtm)

Hoax History

D1 has experienced numerous hoaxes over the past several years. The problem came to Congressional attention with the F/V SOL E MAR case off Nantucket in March 1990. This case consisted of a short distress call followed by an obviously false call -- they were both assumed to be from same caller and were dismissed as a hoax. Later investigation showed that the original call was legitimate, and that the father-son crew had perished. This incident and subsequent hearings resulted in legislation (14 USC 88 (c)) that made false calls a felony and provides the following maximum penalties:

6 yrs. in prison,
$250,000 fine,
$5,000 civil penalty,
Recoupment of CG operational costs.

There have been two criminal convictions so far in D1, both in the case of the P/C "Painted Horse" in Stamford, CT Other cases are currently pending.

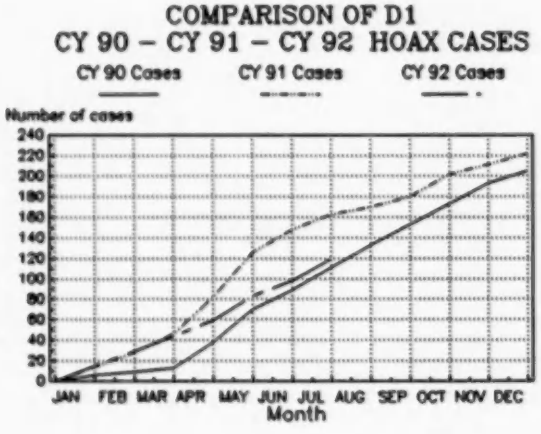
Hoax Statistics

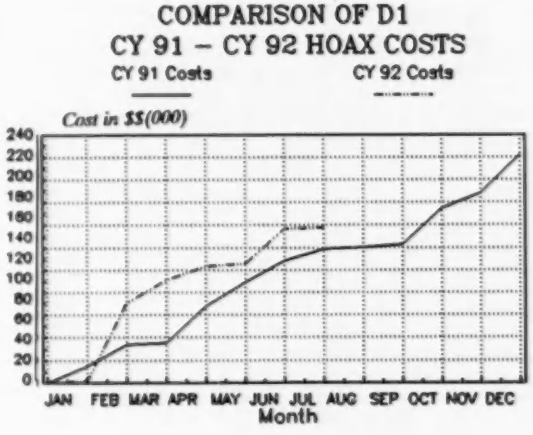
Hoaxes are a persistent problem. They expend scarce resources, divert crews from real cases, and desensitize responders. For D1 The statistics are:

Calendar Year	Number of Cases	Total Cost
1990	205	$534k
1991	222	$201k
1992	120	$138k*

*as of 1 Aug 92

Graphs of this data (below) indicate that CY 92 cases are behind CY 91 and ahead of CY 90. The CY 92 costs are ahead of CY 91 (CY 90 costs were not maintained on a month-by-month basis).





Typical hoax

A typical hoax case in D1 involves a young, usually male voice, making the following call:

"MAYDAY, MAYDAY, I'm drowning, my vessel is sinking and on fire, I'm off Flounder Shoals, help!"

This short (usually less than 10 seconds) call is followed by multiple CG callbacks (usually from several different stations and Groups) in an attempt to establish comms with the distressed vessel. Frequently nothing is heard. Sometimes the caller will provide additional information. Usually there will be conflicts in the information provided, or just profanity or sometimes even laughter.

Many times, the call seems legitimate enough that the CG will dispatch resources to the area (if known) to search for the caller. Information from radio direction finders aids in evaluating the legitimacy of a case. Example: If the caller says he is in a location offshore, but the RDF indicates he is inland, that is a clue that the call is bogus. Information from other vessels is also useful. Example: If the caller indicates he is off Frogleg Point, but another boater calls and says he is off Frogleg Point and there are no boats within 5 miles of him, that is another clue that the caller may not be legitimate (The difficulty here is, a legitimate distress caller might not be in the location that they think they are in).

Not So Typical Hoax

Every once in a while a hoax will occur that is very believable at the start, but will unravel over time. A good example is the case of the P/C SELSUNY, which occurred during the middle of Hurricane Bob in August, 1991.

CASE CHRONO SUMMARY:

1221Q D1 OPCEN received call via Morse Code from a Ham radio operator supposedly aboard P/C SELSUNY reporting himself disabled/adrift 32 miles SE of Montauk Point. The report was being relayed through a Ham radio operator in Indianapolis and indicated the 40 ft. motor yacht was taking on water and had no electrical or mechanical power The only comms were via Morse Code. One crew member had been burned and the remaining two crew members were busy bailing water.

ON SCENE WEATHER - NW wind 67 kt, seas 25 ft., vis. 5 mi. in rain.

1302Q HH65 helo (CG 6542) airborne from AIRSTA Brooklyn.

1325Q P/C SELSUNY reports they have a man overboard.

1356Q HH65 helo (CG 6542) lands at Brookhaven, NY airport due to severe weather.

1400Q HC130 (CG 1500) airborne from AIRSTA Elizabeth City, NC.

1425Q USCGC ADAK underway from storm anchorage, Hudson River, NY.

1457Q HH65 helo (CG 6530) airborne from AIRSTA Brooklyn, NY.

1459Q HH65 helo (CG 6542) airborne from Brookhaven, NY.

1615Q USCGC BITTERSWEET underway from storm anchorage in Vineyard Sound. At this time the CG had: HC130 (CG 1500) and HH65s (CG 6530 & 6542) searching, USCGCs ADAK & BITTERSWEET underway.

1621Q HH65 (CG 6530) finished search.

1737Q USCGC BITTERSWEET released.

1813Q HC130 (CG 1500) finished search.

1816Q HH65 (CG 6542) finished search.

1906Q USCGC ADAK released.

2250Q Active Search Suspended (ACTSUS).

Here is what made us eventually think that the case was a hoax

(The information became known as the case progressed).

EPIRB-Caller stated he had an EPIRB, but no SARSAT hits reported, also stated EPIRB was 243 MHz, only used for military aircraft.

MORSE CODE-Caller sending steady 15 wpm. code in the middle of a hurricane.

CALL SIGN-Caller's call sign not his, belonged to another Ham, who had always held that call and was safe at home.

VSL.-No CG documentation of a P/C SELSUNY.

FLARE-Caller reported he fired a flare when he heard the helo fly overhead, helo not on scene at that time.

SEARCH-Multiple coverage of search area

revealed no debris or vessel in the reported area.

ESTIMATED COSTS TO PROSECUTE CASE

HH65	1302-1356	1hr@	$2,257	$2,257
(CG 6542)	1459-1816	3¼hr@	$2,257	$7,335
(CG 6530)	1457-1621	1½hr@	$2,257	$3,385
C-130. (CG 1500)	1400-1813	4¼hr@	$3,284	$13,957
USCGC ADAK	1425-1906	43/4hr@	$342	$1,625
USCGC BITTERSWEET	1615-1737	1½hr@	$799	$1,198
TOTAL COST				**=$29,757**

Hoax Fighting Tactics

D1 and G-NRS funding of radio direction finders (RDF) and digital recall recorders (DRR) has enabled D1 units to use current technology in the evaluation of cases to determine their legitimacy. The RDF and DRR have proven useful in prosecution of both hoax cases and actual SAR cases.

As an example of the beneficial use in an actual case, in January 1991 Group Woods Hole heard a MAYDAY call from the F/V LEWIS R. WETMORE. However, the transmission was garbled so much that the radioman was unable to determine the position given. The Group, however, had a prototype digital recall recorder installed. They were able to replay the transmission over and over again until they could decipher the latitude and longitude. The CG launched an aircraft and rescued all 12 onboard.

D1 has initiated a working group (The Hoax Enforcement Action Team, or "HEAT" with membership from (D1), (dtm), (opc), (ole) and FCC Boston to improve hoax case prosecution and coordinate hoax enforcement. Their goal is to provide a central focal point for prosecuting, enforcing and tracking hoax cases.

Hoaxes in the Future

Hoaxes will continue to be a problem. Using better evaluation techniques, improved equipment, and enforcement actions, D1 hopes to reduce the number and associated cost of hoaxes. The work of G-TTM and the FCC to make digital selective calling (DSC) technology required on VHF-FM marine radios will also help in identifying hoax transmissions -- the way the 406 MHz EPIRB registration helps to locate false EPIRB activations.

Individual RDF equipment and Rapid Recall Recorders are short term stopgap measures. Full implementation of DSC, coupled with digital Magnasync replacements, National Distress System upgrades, and joint FCC/CG Integrated RDF networks will considerably reduce the hoax problems for D1 and the CG.

Conclusion

Hoaxes are frequently very difficult to evaluate. In fact, at first many are indistinguishable from real cases. The major concern should be not declare a hoax and have it turn out to be real (like F/V SOL E MAR). The bottom line in dealing with hoaxes is to err on the side of caution and launch when there is a possibility that the call might be legitimate. Despite the considerable cost of this caution, it is worthwhile when compared to the value of human life. *o/s*

HH-60J Rotor Wash

By: LCDR T. Sparks, Operations Branch, Aviation Division, G-OAV

The HH-60J Jayhawk has replaced the HH-3F at all but two Air Stations. By this time next year, only OPBAT will still operate the HH-3F. The HH-60J has brought many changes to the Medium Range Recovery (MRR) helicopter fleet, most of them for the good. One change that holds a potential hazard for YOU, is that the HH-60J produces significantly stronger rotor wash than an HH-3F or HH-65.

While there is no quantitative data to compare specific rotor wash speeds, we can look at our experiences during the change from HH-3Fs to HH-60Js. In our two years of operating the HH-60J, we have had a few incidents where HH-60J rotor wash caused damage or injuries to people and property on the ground, even though an HH-3F or HH-65 would not have:

--In one case, an HH-60J hovering at 200 feet blew over a picnic table hidden in the trees below.

--People working below a hovering HH-60J to hook up sling loads have commented frequently on the surprising strength of the rotor wash. Walking into the wash to get below the helicopter is very difficult. On the other hand, when moving out from underneath the HH-60J, the wash pushes you so fast that it is difficult to stop until you're as much as 30 yards away.

The lessons for boat crews involved in helo ops are obvious:

--Tie it down or stow it. Loose objects will go over the side. This includes deck gear covers, bags, etc. which could load up like a wind sock and quickly become airborne.

-Wear proper safety equipment including helmet, eye protection and PFD. Secure all clothing fasteners, including zippers, pocket flaps, buttons, etc.

--Use caution when moving below, around, or near a hovering helicopter. Any moves made on a pitching, rolling deck are definitely more hazardous and complicated with rotor wash and noise.

--Rotor wash from an HH-60J will result in more leeway for your vessel making it much harder to maneuver or station keep. Positive control and steerageway is required at all times. Coming DIW near a hovering helicopter may not actually be possible.

--The increased spray will reduce operator visibility and could cause a hazardous distraction for those operating in the stinging spray.

--Use caution anytime you face a new situation, be it a new helicopter, unusually low tide, or new crew members. Don't assume that because it went okay the last time that it will be the same in the new situation. *o/s*

"The HH-60J produces significantly stronger rotor wash than an HH-3F or HH-65"

RESCUE AND SURVIVAL SYSTEMS NOTES

By: CWO Mark O. Hyde, G-NRS-2

I ALMOST SWALLOWED A CLAM!

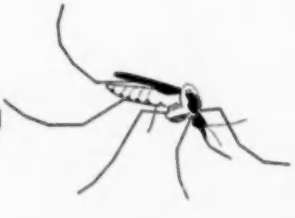
About two years ago I was sitting in the Headquarters cafeteria surviving a seafood platter when I was informed we received $750K to implement a new dewatering pump. My predecessor had been working on the CG-P5 dewatering pump project prior to my arrival at headquarters but funding was limited.

Well the project is on its final lap and here is the trophy. The CG-P5 Dewatering/Firefighting pump has been or will be delivered to your station soon. It consists of a 5 horsepower, 200 gallon per minute dewatering pump that fits in the aluminum container now used for the CG-P1B. The pump also has limited firefighting capabilities with foam eduction. Other features include a corrosion resistant recoil starter, quick connect hose fittings, and a shock resistant kill switch.

Starting in July 92 all 41' UTB's, 42' ATB's, 44'/47' MLB's and WMEC's started receiving an initial issue pump and every unit with any of these vessels will get a spare pump. This pump supplements the CG-P1B but will not replace it. Units may use either pump on their small boats. If your unit is not part of the initial outfitting you may order a CG-P5 from SUPCEN Brooklyn. The stock number is CG4320-01-326-5935.

One last item, if you ever have the "pleasure" of visiting Headquarters don't order the seafood platter.

DON'T LET THE INSECTS GET TO YOU



The U.S. Army developed a new version of the standard issue insect repellent. This new formulation lasts up to 12 hours per application. This is three times longer then the old repellent.

The new easy to apply repellent is a lotion versus a liquid and contains an acrylate polymer formulation of the active ingredient "DEET" which sustains release of the chemical from the skin.

This new repellent is also more water resistant, it doesn't smell like dirty socks, it doesn't damage plastics, and it doesn't feel oily to the skin.

Now you ask how to keep those pesky mosquitoes, flies, fleas, chiggers, and terrestrial leeches off you? I know it's winter. Just place your order to the Federal Stock System (NSN: 6840-01-284-3982).

THE BLUES ARE NOT FOR US

Have you have ordered a blue float coat lately and noticed that you received a orange one? We have contacted all float coat manufacturers and restricted them from selling Coast Guard units blue float coats. This was done in order to comply with the Rescue and Survival Systems Manual (COMDTINST 10470.10 Series). It makes good common sense to have a highly visible color if you happen to find yourself in the water. By complying with this it also sets a good example for the public to buy visible life preservers.

I have received complaints about enforcing the "no blue PFD's requirement." Most of the complaints are based on how units do not use the float coat for a lifesaving device. A float coat is a Type III PFD not a work jacket. If units want a good waterproof blue work jacket, I have finally worked out a deal with the Air Force so our units may procure the Air Force security jacket from the stock system. If you would like to buy this jacket use the following stock numbers:

AIR FORCE SECURITY COAT

NSN	SIZE	NSN	SIZE
8415- 01-017-9781	30S	8415- 01-017-9798	40L
9782	30R	9799	42S
9783	30L	9800	42R
9784	32S	9801	42L
9785	32R	9802	44S
9786	32L	9803	44R
9787	34S	9804	44L
9788	34R	9805	46S
9789	34L	9806	46R
9780	36S	9807	46L
9791	36R	9808	48S
9792	36L	9809	48R
9793	38S	9810	48L
9794	38R	9811	50S
9795	38L	9779	50R
9796	40S	9780	50L
9797	40R		

THE ALL NEW RESCUE AND SURVIVAL SYSTEMS MANUAL (COMDTINST 10470.10C)

It finally has hit the street! If you have not received your copy yet it shall be coming soon. Unfortunately, some mental genius released it to field units without the laminated pages. Your laminated PMS cards with a change to the litter section in Chapter 9 will be out soon. There are lot of changes from the old manual, so check it out.

HELMET LINERS

The National Motor Lifeboat School has identified a couple of helmet liners that seem to work well. The "Strohlquist" helmet liner is a pile-lined, skull cap style with a velcro chin strap. It has good warmth and wicking with fair water resistance. The "Damart Double Force Balaclava" offers similar performance, but with full face and neck protection. Both are about $10.00/ea. and available from:

Damart
3 Front St.
Rollingsford, NH 03805
(603) 742-7420

Ebb and Flow Kayak Center
0604 SW Nebraska
Portland, OR 97201
(503) 245-1756

Latest Idea Express Adoptions

By: LT W. Driver, G-NRS-2

The success of Idea Express may be limited by implementation. I use this column to give maximum exposure to the ideas approved as either mandatory or optional. It is our intention to routinely publish the Ideas we have approved for use. If additional information is needed to implement these suggestions, contact LT Wes Driver at 267-1590.

MODIFICATION OF TWIN ENGINE ELECTRICAL SYSTEMS

A problem was identified with the charging systems on boats with twin OMC 70 HP motors. Specifically, both positive leads from the engines' alternators are attached at a common point and feed the battery or batteries. Since 70 HP engines do not have voltage regulators, full charging power is delivered at all times. This can overcharge batteries and damage radios, lighting, etc.

A correction to this problem was approved. It includes installing a voltage regulator, changing the switch and wiring. For more details on this procedure, contact your District Boat Managers.

41' FUEL SOUNDING ROD

The 41' UTB the Fuel Sounding Rod brackets on do not adequately hold the Fuel Sounding Rod in place. To correct the problem, drill a 3/8 inch hole through the rod bracket and rod, and insert a corrosion resistant stainless steel pin (NSN 5315-00-123-9241 cost $4.18), on a lanyard, in the hole to hold the Fuel Sounding Rod in place.

BEWARE OF HATCH!

Since the introduction of the UTB there has been a safety problem with the engine hatches. BOATALT 7 issued 15 April 1975 required the installation of a locking cam to eliminate the safety hazard. Over the years these cams have been worn, removed, and bent rendering many useless. UTB stations should inspect these cams monthly for proper fit and condition.

When the engine room hatch opens, the cams MUST swing outboard until striking the side of the hatch coaming, not the knife edge. If a cam is unserviceable, it should be replaced or the arc cut down to eliminate the problem.

MIRACLE SPRAY WASHER:

A recent "Idea Express" to carry a squeegee on small boats was adopted for optional use. A squeegee with a spray bottle in the handle is identified by the suggestor. The squeegee makes the cleaning of windows easier and does a better job, together we may even save a tree. In the stock system, a squeegee hasn't been found configured with a spray bottle. The squeegee identified by the suggestor was the "Miracle Spray Washer, part number 1206" It may be obtained from:

SAMVCO CO.
8033 Sunset Blvd.
Suite 2659
Los Angeles, CA 90046
(213) 874-0135

* * * *

BOAT COMMONIZATION WHAT IS IT AND WHY?

During Desert Shield, some units mission was to provide a security zone and required the temporary assignment of 15+ boats. Logistically and operationally it was a nightmare. No two boats were the same. Spare parts were not common between boats and every boat was configured differently. This problem is not new. In an earlier review of 650+ nonstandard boats, we discovered that we have over 100 different types. It must be in writing that immediately after a change of command every Officer in Charge and Commanding Officer must call the district Boat Manager to complain that their nonstandard boat is inadequate. The ONLY boat that will do the job is the boat from their previous unit. WRONG!

In 1988 and in 1990 district boat managers were directed to review their boat allowances and reduce allowances. One rule is that a unit should have no more nonstandard boats than the Commandant approved Bravo Zero readiness. We are still reducing boat allowances to reach the optimum number. The next step is to have each district decide

on a boat that would serve as the districts "common" boat. By having the same boat, with the same power and configuration at each unit, the result is reduced support costs and time spent training. The districts that have already accomplished "commonization" have found it works well.

What's next? The concept is to eliminate all nonstandard boats by the year 2000. This will be done by developing a menu of four or five boats from 17' to 27'. This cannot be done overnight, To ensure fair competition a sponsors requirements document must be developed for each boat. These documents are quite lengthy and cumbersome. Once the standard 17' to 27' boats are in service, they will be fully supported by the integrated logistic system and will receive operating and maintenance funding. Bear with us as we move towards the 21st century, the future will be an improvement. *o/s*

Helpful hints

D-17 OPCEN developed a "Phone list" and a "Search Plan Assumption Worksheet".

On big cases, the "Phone list" avoids the burying of phone numbers in pages of Chrono. Printed on pink paper, it stands out in the case file.

The "Search Plan Assumptions Worksheet" allows documentation of why a particular search approach was adopted to aid in FOIA requests and case reviews. *o/s*

New Methods to organize thoughts and improve case documentation are always encouraged.

* * * *

SEARCH PLAN ASSUMPTION WORKSHEET

DATE: CASE TITLE:
SMC: CASE NUMBER:

1. DRIFT_____^{0}T AT_____KTS, CALCULATED FROM DTG_____

2. DRIFT (TWC, LW, DMB, ETC...) ATTACH PROPERLY LABELED WORKSHEETS IF APPROPRIATE.

3. DRIFT CALCULATION METHOD _____, FROM _____(PUB, WORKSHEET, DMB, ETC...).

4. DRIFT ASSUMPTIONS (SEARCH OBJECT, LOCAL KNOWLEDGE, ETC...). _____

5. OTHER SEARCH ASSUMPTIONS:_____

OTHER COMMENTS:_____

==========

PHONE LIST:

NAME	NUMBER	RELATION
_____	_____	_____
_____	_____	_____

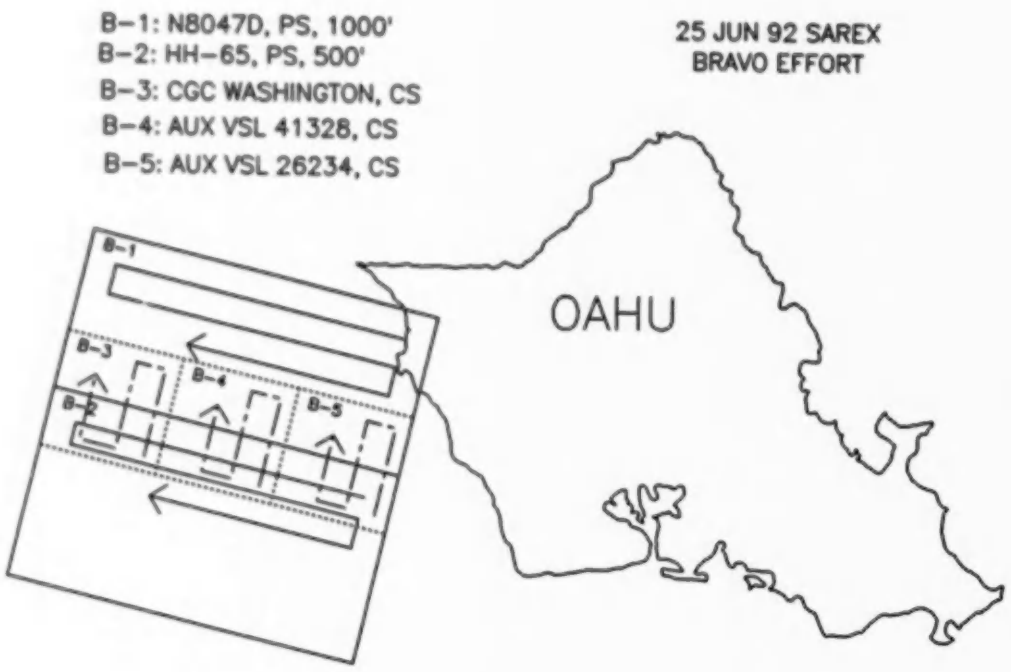


Figure 1-Search patterns assigned to SAREX units.

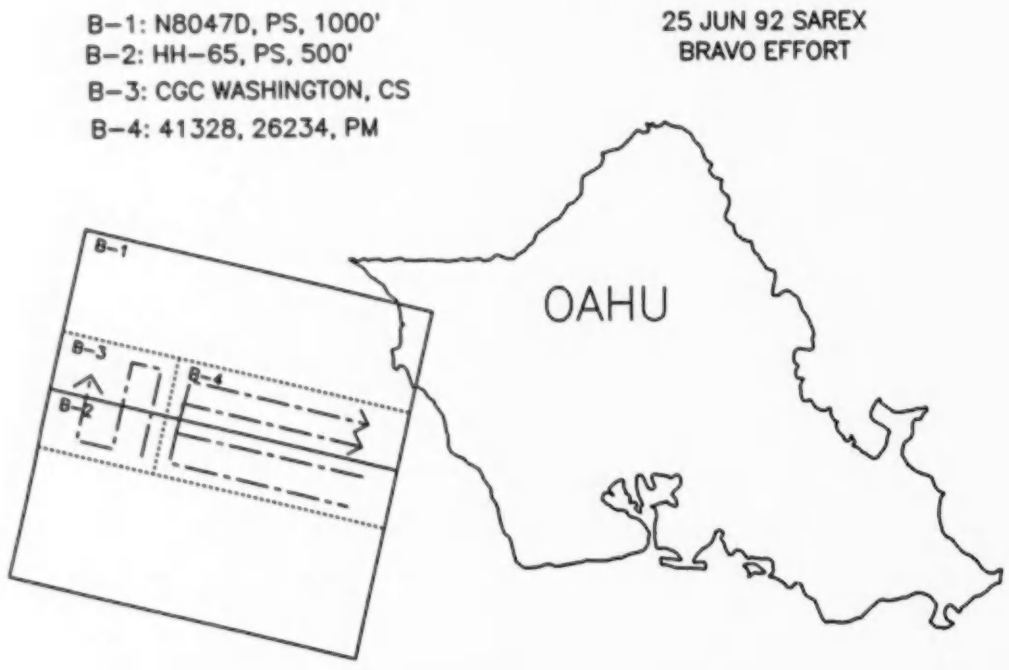


Figure 2-"PM" Search pattern.

ON SCENE COMMANDER SAR EXERCISE

By: QMC J. E. Connolly, Coast Guard Group Honolulu

Coast Guard Group Honolulu recently conducted an On Scene Commander search and rescue exercise with Coast Guard and Coast Guard Auxiliary units to test their ability to conduct joint SAR operations. As the only group within the Fourteenth District, Group Honolulu is OPCON for four patrol boats and two stations. On a regular basis, the group conducts operations with cutters, boats, C-130 and HH65 aircraft, and Auxiliary vessels, aircraft and radio facilities.

The SAREX was planned with three objectives: (1) test the ability of a 110' WPB to act as OSC for a multi-unit search, (2) test the effectiveness of Coast Guard and Coast Guard Auxiliary units to conduct SAR in the same environment and (3) exercise each unit's search scanning and execution capabilities.

The SAR scenario began with the downing of an HH-65 helicopter which had been conducting a night flare search off of the Waianae coast of Oahu, a common source of flare reports. The Alpha search effort was negative and a first light Bravo search effort was planned by the group OPCEN. CGC WASHINGTON (WPB-1336) was designated OSC and assigned CG-6507, Auxiliary aircraft N8047D, Auxiliary vessel 41328, MALAMA KAI, and Auxiliary vessel 26234, SATISFACTION, to carry out the Bravo search effort. Finally, OSC exercise instructions were promulgated and an exercise Search Action Plan was transmitted to all units. Units were assigned as shown in figure (1).

To realistically test the unit's visual search capabilities a small orange target was deployed before the exercise commenced. All search units arrived on scene at 0900W, and commenced their searches as planned. CGC WASHINGTON assumed OSC, took control of all units and assumed radio guard for the two aircraft. Because of navigation equipment problems enroute, 26234 was unable to search its assigned area. WASHINGTON quickly compensated by combining the two Auxiliary vessel's search areas and directing them to carry out a Parallel Track Multiunit (PM) search pattern, with 41328 acting as guide for the 26234 (see figure 2).

Both aircraft search areas were quickly completed without incident. However, the search target remained unlocated. WASHINGTON had Auxiliary aircraft N8047D reverse his search pattern to search its assigned area once more with time remaining and quickly began calculating a revised search area for CG-6507, based on calculated drift. Approximately fifteen minutes later the target was located by N8047D and recovered by the MALAMA KAI, completing the exercise.

This exercise proved to be an extremely valuable experience in coordinating a multi-unit search effort. The OSC was able to effectively manage search units with varying levels of search expertise, quickly adapt to changing conditions, and communicate clearly with all parties.

At the debrief, several recommendations were made for improving coordination of future SAR missions. First, On Scene Commanders should be well prepared to manage assigned aircraft. It is very important to plan well ahead for aircraft, to maximize their search time, make it effective, and limit the time they spend waiting for alternate tasking. The OSC should know how long it will take to execute each assigned search area and start alternate planning immediately. Second, standard ops "normal" report times made it easier to maintain track of assigned aircraft. Local Auxiliary aircraft are trained to always report exactly on the quarter, half, three-quarter and hour periods. Having all aircraft report in a "call sequence" consolidated radio transmission, eliminated confusion in tracking units. Finally, vessels with limited or no navigational equipment can be effectively utilized by pairing them with fully equipped boats that act as guide for a PM pattern.

The SAREX objectives were met satisfactorily and demonstrated the effectiveness of coordinating Coast Guard and Coast Guard Auxiliary forces. *ots*

Satellite Tracked Datum Marker Buoys (DMBs)

By: Mr. A. A. Allen (R&D Center) and LT M. D. Stegman, CCGD14

(Editor's Note: The R&D project "Improve SAR Capabilities" (ISARC) has been experimenting with different types of self-locating Datum Marker Buoys. One type, a satellite tracked buoy is discussed here.)

Any SAR Planner who has ever relied on the present Radio Direction Finder/Datum Marker Buoys (RDF/DMB) for successful deployment and accurate drift information knows the true meaning of frustration. In addition to their notoriously high failure rate, these RDF/DMBs often cannot be relocated and only provide drift information for the relatively short period that SAR aircraft are on scene.

Background

In an effort to replace the antiquated RDF/DMBs, the Coast Guard Research and Development Center (R&DC) in cooperation with Commander International Ice Patrol (IIP) is conducting an operational test of air-deployed satellite tracked drifting buoys, called Mini TIROS OCEANOGRAPHIC DRIFTERS (Mini TOD's), for use as current measuring devices in the Fourteenth District's (D14) SAR operations. D14, headquartered in Honolulu, HI was selected as the site because of it's large (17 million square miles) open ocean Area of Responsibility (a good portion of the North Pacific Ocean) coupled with limited to nonexistent sea current information for the area.

The air-deployed Mini-TOD, similar in shape to the RDF/DMB, is equipped with a parachute that softens the landing and detaches upon impact. A sea drogue is also included to reduce leeway and allow the mini-TOD to more accurately simulate surface currents. Each Mini-TOD is individually coded and transmits on a frequency of 401 MHz. They are designed to transmit for at least 90 days, however, significantly longer activation periods have been observed. SERVICE ARGOS, INC. tracks the Mini-TODs using a locating system on two polar orbiting satellites of the NOAA series. Position accuracy is approximately 0.2 NM with D14 experiencing 04-06 satellite passes per day. Position reports for each active Mini-TOD are processed and forwarded by IIP Operations Center watchstanders directly to the D14 Operations Center. These reports include the present Mini-TOD position, drift vector from last position to present position, water temperature, a list of all previously reported positions/drift vectors/water temperatures, and an overall drift vector from insertion to present position. A graphical plot of the Mini-TOD's movement is also provided.

D14 Test Strategy

In June 91, fifteen Mini-TODs and one "GONIO 400" 401 MHz portable Radio Direction Finder were delivered to D14 for use in SAR operations. The Mini-TODs were prepositioned at Air Station Barbers Point , HI for immediate deployment on C-130 aircraft. The GONIO 400 RDF was installed on USCGC WASHINGTON to facilitate Mini-TOD recovery. Mini-TOD recovery was to be performed on a not to interfere basis. R&DC personnel provided all necessary training on drifter deployment, recovery, repacking, and use of the GONIO 400 direction finding equipment. D14's test plan was to deploy the Mini-TODs on actual SAR cases involving multi-day open ocean searches.

D14 Deployment results

1. As of June 92, 11 Mini-TODs have been successfully deployed in a total of seven D14 SAR cases. Drift information provided by the Mini-TODs was used in search planning and Computer Assisted Search Planning for three of these cases. Unfortunately none of these search targets were located and active search was suspended. The remaining four cases were resolved prior to using the Mini-TOD drift information.

2. Mini-TOD recovery operations utilizing CGC WASHINGTON have been very successful. Only three Mini-TODs remain unrecovered. The recovered drifters have been returned to Air Station Barbers Point for repacking and redeployment.

Advantages

1. 100 percent reliability. All eleven Mini-TODs

deployed and activated successfully.

2. Increased search time. Since Mini-TODs are satellite tracked. SRUs need not waste critical search time attempting to relocate RDF/DMBs.

3. More accurate Search Action Plans. Mini-TODs provide sea current data to the SAR planner before SRUs are launched on multi-day sorties. As a result, SAR planners can generate more accurate Search Action Plans without waiting for SRUs to relocate previously deployed RDF/DMBs.

4. Although not specifically designed for this purpose, the Mini-TOD could serve as an emergency EPIRB replacement. The Mini-TOD will operate for a minimum of 90 days. This far exceeds the 48 hour 406 MHz EPIRB standard. In SAR situations where accurate distress positions are required and the SAR Coordinator is concerned that an EPIRB's battery might expire prior to a maritime SAR resource arrival on scene, a Mini-TOD could potentially be dropped by SAR aircraft and recovered by those in distress.

Limitations

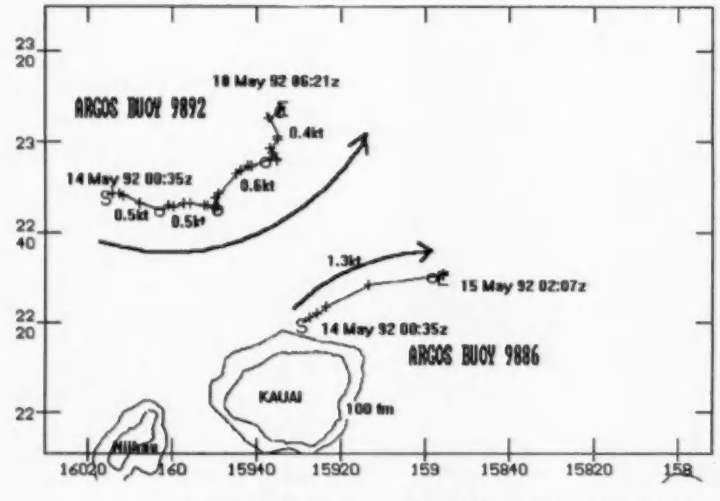
1. Mini-TODs provide significantly more current movement information than can be obtained from RDF/DMBs. As a result, all the erratic movement associated with actual current motion is much more apparent. This information can be confusing to the SAR planner and requires close scrutiny to prevent false assumptions.

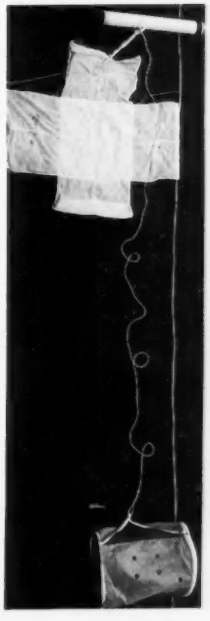
2. The Headquarters Aviation Operations Division currently authorizes Mini-TOD deployment only from Coast Guard C-130 aircraft. This limits Mini-TOD use when helicopters are the only available aircraft.

3. Time lag between Mini-TOD deployment and the initial position report can be several hours. Consequently, it may take six or more hours to receive two satellite passes and obtain a drift vector.

Conclusions

Test results in D14 have already demonstrated the operational superiority of these new satellite tracked drifting buoys over the existing RDF/DMBs. In addition to unparalleled reliability, these Mini-TODs have served to increase the SRU's actual on scene searching time by eliminating the need to relocate and/or redeploy RDF/DMBs. Additional testing, however, will be required to determine how closely the movement of these new drifters reflects actual current movement and consequently actual SAR target drift. *o/s*





Above: Trackline of Argos Buoy 9892 and Buoy 9886. Right: Data Marking Buoy.

ISARC Project acquires Satellite Receiving Station

By: J. E. Dick, USCG Research and Development Center

The Coast Guard Reasearch and Development Center recently acquired a satellite receiving station for its Improvements to Search and Rescue Capabilities (ISARC) project. This system will enable the Coast Guard to estimate sea surface currents over a broad expanse of the ocean. Traditional methods for determining surface currents such as current meters, drifting buoys, and direct temperature measurements would require a prohibitive number of instruments to cover the same area. In addition, measuring the currents in even a small area a long distance from shore can be extremely expensive because these methods all require on-site deployment. Being able to accurately determine sea currents is one of the most important concerns in open ocean SAR. Remote sensing systems, can provide nearly instantaneous images of circulation patterns over very large areas. The current systems can be determined by identifying some property of the water, for instance temperature or color, that differs from that of the surrounding water. This can be seen in figure 1. Sea surface temperature is indicated by shading. The warm waters of the Gulf Stream (lighter shade) clearly contrast with the cooler waters north of it. Large circular eddies can be easily seen to the north and south. Arrows point to small scale thermal features which can be used to estimate surface currents.

The R & D Center's satellite receiving station, which has been in operation since the end of June 1992, tracks the NOAA-n series satellites as they pass within range of our receiving antenna (located on the roof of R & D Center in Groton, CT). The NOAA-n series satellites pass over the R & D center twice a day. Since we are tracking NOAA-11 and NOAA-12 we receive two daytime and two night-time passes every 24 hours. Our system is designed so that we can view the images as the satellite is sensing them. The satellites acquire information over a path 2600 km wide on the earth's surface. The ground resolution is 1.1 km at nadir, which is the location on the earth directly below the satellite. This resolution becomes coarser as the angle between the satellite and the position on the earth's surface increases.

Advance Very High Resolution Radiometer (AVHRR) passes last up to 15 minutes. This is the time it takes a satellite to cross the sky from one horizon to the other. The ISARC antenna has a clear horizon down to about 2 degrees in almost all directions. However, we have been able to track the satellites as low as 0.1 degree above the horizon. Our viewing area ranges from Iceland to the West Coast and from Venezuela to Baffin Bay.

The Coast Guard's satellite receiving and image processing system consists of a Data Acquisition Module (DAM) which positions the antenna to track, receive, and save the data from the satellite, and a Data and Image Processing Module (DIPM) which enables processsing of the data that has been received. The two modules are connected via "Ethernet". DAM hardware consists of a Telonics Earth Station and IBM compatible 80386 "capture computer." The image processing is performed on a Hewlett-Packard Series 9000 Model 835 Turbo SRX Superworkstation.

The Telonics earth station is fully automated. The operator can schedule any number of passes up to 7 days in advance. Once scheduled, the system requires no further operator assistance to track the satellites and record the data. By changing antennas the system becomes portable which will enable us to take it on field experiments, either land-based or shipboard.

The satellite receiving station will be used to estimate sea surface currents from AVHRR images. The technique, which the ISARC project is presently developing, is based on the comparison of a time-series of remotely-sensed images (like the "satellite loops" on the TV weather). The motion of thermal features, such as those discussed above and shown in Figure 1, will be determined from the images. Knowing the distance the features have traveled and the time between the images, the surface currents

can be estimated. The current vectors obtained from this will provide a pattern of the sea surface circulation. The drift information from datum marker buoys being tested in Districts 1, 5, and 14 will be incorporated into the derived circulation pattern. The datum marker buoys will provide the small scale data on surface currents that will complement the large scale data obtained from the satellite images.

The goal of this project is to incorporate the current magnitudes and directions obtained from the satellite imagery into CASP (Computer Aided Search Planning) program. Presently, CASP obtains its sea surface current information from either the Fleet Numeric Oceanographic Center (FNOC) analysis model or a default database of historical current fields. The FNOC data is provided to the Coast Guard on a 3 degree by 3 degree grid which means that the grid points are 180 nautical miles apart. The currents derived from our satellite images will provide data at the intermediate scale between the FNOC data and the datum marker buoys. The FNOC data will be used for oceanic scale search planning, the satellite imagery currents for regional planning, and the datum marker buoys for searches originating from a well known datum

Since the ocean is changing constantly, currents determined from real-time satellite imagery will represent the actual sea surface conditions more accurately than currents estimated from numerical models or from historical data. More precise estimates of the target position will be possible, thereby reducing the area of probable detection for searches. This will enable the Coast Guard to use its resources more efficiently in terms of cost and time. *o/s*

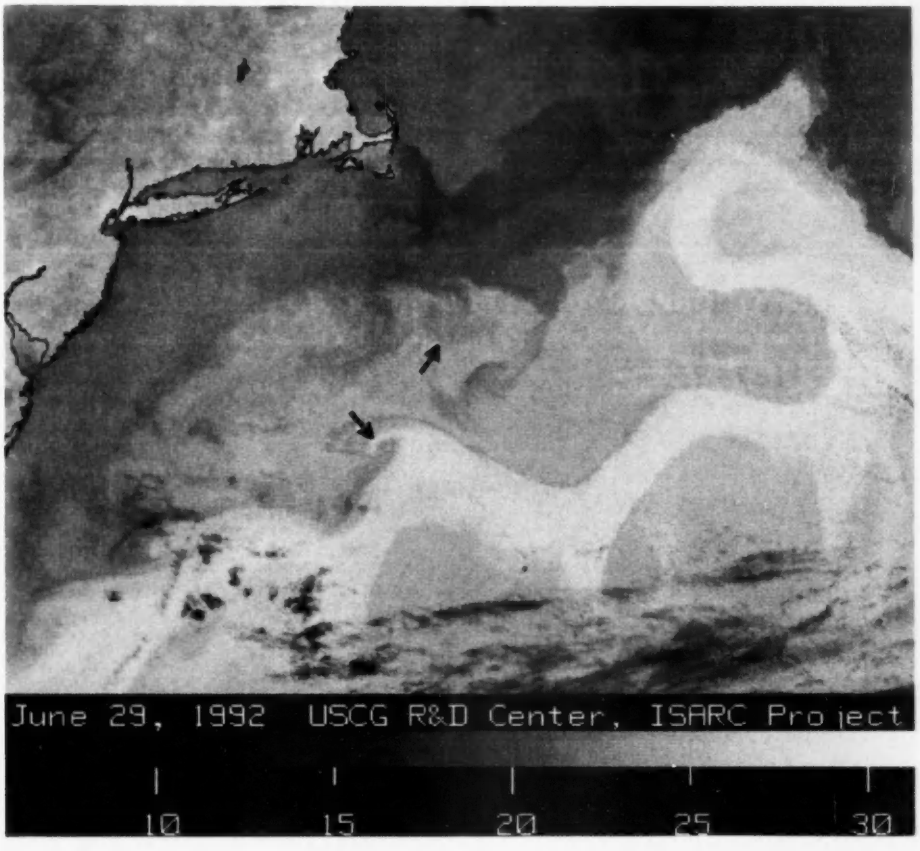


Figure (1) satellite image of the Gulf Stream. Scale at bottom correlates sea surface temperature (^{o}C) to "gray scale."

CASP....1.0.....2.0.....

By: LT R. C. Patton, G-NRS-1

Many of you are aware that Computer Assisted Search Planning (CASP) is undergoing a revision. We all recognize various shortcomings with the current CASP program (CASP 1.0) in use since the early 1980s. The CASP 2.0 project is part of a major data processing initiative to reduce the administrative burden at operational units while improving their effectiveness in various mission areas.

CASP 2.0 will become operational in FY 96. What are we doing in the mean time? Modifications to CASP 1.0 focus primarily on improving user interface and environmental data files.

Recently, a team of CASP users made recommendations for "quick fixes" to CASP 1.0 during the CASP 2.0 Requirements Workshop, hosted by the Coast Guard Operations Systems Center in Martinsburg, WV. Representatives from Area, District, Section, and Group OPCENs, as well as G-NRS, International Ice Patrol, SAR School, Electronics Engineering Center, and the Research and Development Center attended the workshop. Each of the recommended "quick fixes" will be implemented as soon as possible, including the following:

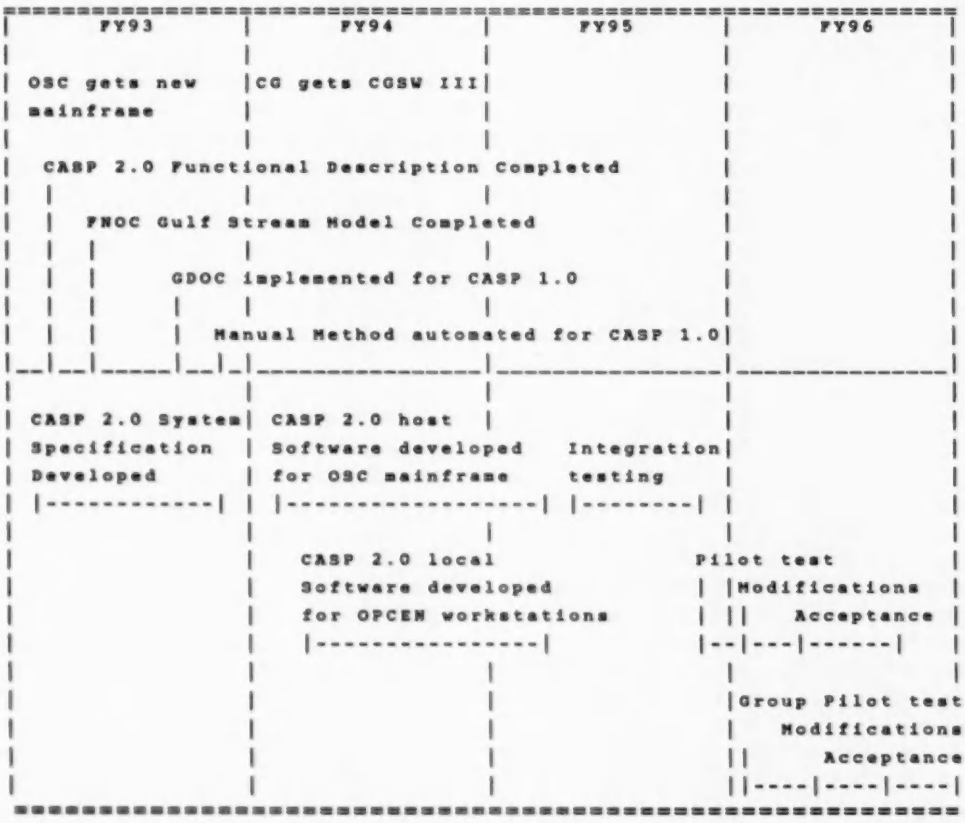
- o Automate the manual solution.
- o Add an option for DMB Data.
- o Develop a Geographic Display Operational Computer (GDOC).
- o Improve data editing.
- o Display the required format for user entries.
- o Improve scaling of probability maps to match navigational charts.
- o Prompt users to provide new situation weights when situations are added.
- o Provide more frequent interim datum positions.
- o Provide more accurate environmental data.

In addition to the "quick fixes", the team recommended basic requirements for CASP 2.0. This new version will be developed to help SAR controllers at Area, District, and Group levels manage case information, plan searches, and evaluate results easily and quickly.

- o Users will be able to enter data both graphically and using automated SAR checklists.
- o Data entered will be shared between CASP 2.0 and other OPCEN information systems.
- o The best available environmental data will be drawn from an expanded database.
- o Case scenarios will be simple to develop and graphically display.
- o CASP 2.0's drift will be done at short intervals on a fine grid, to increase accuracy.
- o Probability maps will be quickly displayed on electronic charts as well properly scaled for overlays on standard navigational charts.
- o Planners will be able to develop and evaluate both immediate and long-term search strategies.
- o SRU selection will be simplified.
- o Search action plan message generation will be automated.

The real success of these CASP projects depends on your support and feedback. Please continue to make recommendations on ways to improve the CASP system. *ade*

These CASP projects should be completed in accordance with the following time line:



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Give Us Your SAR Input!

We are in the process of collecting information for possible inclusion in the next change to the National SAR Manual and the Coast Guard Addendum to the SAR Manual. If you have information, new ideas, or suggestions for improving these two documents, please send me your input.

Format is not important.
E-MAIL attachments are preferred. *o/s*

Send Replies to: Commandant (G-NRS-1)
2100 2nd Street SW
Washington, DC 20593

E-MAIL address: LCDR D LEE/G-NRS

Flare Case Prosecution and Flare Position Rapid Plotters

By: QMC R. A. Coster, National SAR School

Flare case prosecution is one of the most challenging and potentially most rewarding search planning problems faced by Group and District RCC watchstanders. The U.S. Coast Guard recognizes red or orange flares and pyrotechnics as marine and aviation emergency signals. They must be treated as a possible distress and acted on. A thorough investigation conducted by the SAR Planner will dictate the appropriate level of response in your Area of Responsibility (in some cases, a phone call will solve your problem; in others, you will need to dispatch a resource). Remember, each flare report has to be evaluated on its own circumstances. Be extremely cautious when making comparisons to previously prosecuted reports. Remember, it is Coast Guard policy that unresolved red and orange flares require a first-light search!

Activation of the SAR system usually comes from a radio report or phone call (possibly cellular). The interviewing techniques of the watchstander, coupled with a good incident planning checklist will prove vital to a successful SAR case. Both these tools should be available to you, the planner. Training in interviewing can be obtained using the same sources used by local rescue and police forces such as "911" operators or "Hotline" volunteers. A good incident planning checklist should be developed and tailored to your own AOR. A sample Flare Case checklist is in the CG Addendum on page 2-49.

Let's take a look at how the prosecution of a flare case should proceed.

INITIAL ACTIONS

To use the Flare Position Rapid Plotters (FPRP) the planner needs the following information from the reporting source:

* A good call back number and their exact location. Call them back if it is long distance for them. Your OPCEN should have both charts and street maps of your AOR.

* Try to get the name of the reporting source. Observers are an important part of the case. Let them know you may be using them to "vector in" a SAR Unit when it arrives.

* Color. Red, orange or some other color. Specific guidance from your OPCON will determine if you react to other than red or orange flares. Remember, atmospheric conditions and distance may distort the true color of the flare (i.e. A red or orange flare may be reported as a white flare or vice versa).

* Line of Bearing. Orient the reporting source's shoulders parallel to the shoreline facing seaward. It is best to tell the reporting source their nose is 12 o'clock, left hand 9 o'clock, and right hand 3 o'clock. Convert to a relative bearing - each "hour" spacing becomes equal to 30 degrees between 270 - 090 degrees relative.

* Determine apparent origin. Did the reporting source actually see the flare come from a craft? If no, was it rising, falling or steady? How was the flare oriented with the background and surrounding geography?

* Number and interval of flares sighted. This may help determine if there is an actual distress or if special operations/events are being observed (i.e. aircraft, high intensity sodium lights on fishing vessels, submarine operations, meteor showers).

* Time of burn. This helps determine the type of flare being observed. (i.e. hand held, parachute or star/pen-gun type).

* Angle of Elevation. If the flare is sighted below the horizon, the flare is located between the observer and the horizon. If the flare is above the horizon, estimate the angle of elevation using the "Fist" method. Obtain the observer's height above sea level, 10 ft. per building floor.

Above– Angle is measured with arm fully extended in front of your body.

• On Scene Weather. Wind adversely impacts a flare's performance. No tables for wind corrections to flare performance exist. High winds coupled with improper firing of the flare (i.e. too low of an angle or into the wind) dramatically affect flare performance. Visibility is also very important. Are there squall lines in the vicinity? How far could a person actually see the flare? Metrological visibility may be less than the flare's nominal range.

• Expect correlating reports. If none are received, solicit reliable sources (UMIB, bridge tenders, park rangers).

CONSIDER DISPATCHING A RESOURCE! Undue delay of a SRU could create the necessity of a first light search. The sooner a resource can get on scene, the greater the chance of identifying the flare originator.

PLANNING

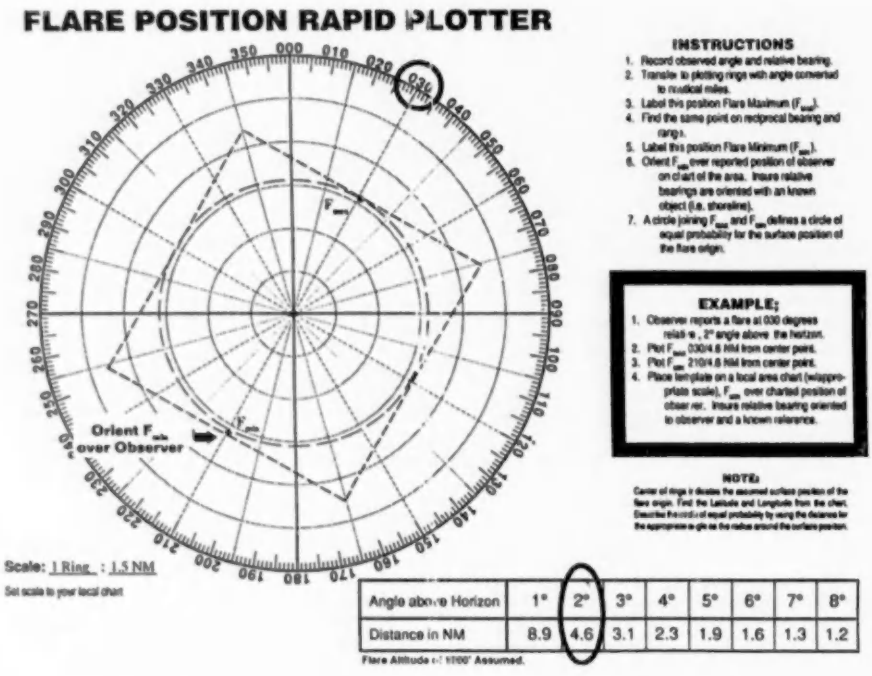
Unfortunately, many errors may accumulate when a reporting source translates what is seen to the planner. The goal of the planner is to develop a search area that contains the position where the flare originated. It is critical that this is done quickly so a resource can be dispatched. In actual emergency situations as time elapses, the situation invariably deteriorates (vessel sinks, flares depleted/lost, victim drowns or drifts out of the search area). A practical approach is in order. Knowing that you will develop a search area using data which may contain errors is important to recognize and accept. In your favor is the primary target, a FLARE. The estimated night time sweep width for flares are 8.0 NM for a red pen gun, 10.0 NM or more for a red meteor (star) or parachute flare. The CG Addendum currently provides seventeen pages of guidance on prosecuting a flare case. Clearly the time to read it is before you have a flare case to pursue, not after. Two accepted methods to establish search area are available to you. The current methodology in the CG Addendum or the Flare Position Rapid Plotter (to be included in Change 2 to the CG Addendum).

The FPRP captures the technical guidance found in the CG Addendum to the NSM and renders it invisible to the SAR Planner with the following results:

• Reduces opportunity to blunder during planning phase. Less confusion from numerous tables and graphs.

• Reduces time between report and dispatch of an SRU to an appropriate search area.

• Produces a STANDARD product that our


FLARE POSITION RAPID PLOTTER
INSTRUCTIONS
1. Record observed angle and relative bearing.
2. Transfer to plotting rings with angle converted to nautical miles.
3. Label this position Flare Maximum (F_{max}).
4. Find the same point on reciprocal bearing and range.
5. Label this position Flare Minimum (F_{min}).
6. Orient F_{min} over reported position of observer on chart of the area. Insure relative bearings are oriented with an known object (i.e. shoreline).
7. A circle joining F_{max} and F_{min} defines a circle of equal probability for the surface position of the flare origin.
EXAMPLE:
1. Observer reports a flare at 030 degrees relative , 2° angle above the horizon.
2. Plot F_{max} 03024.6 NM from center point.
3. Plot F_{min} 21014.6 NM from center point.
4. Place template on a local area chart (w/appropriate scale), F_{min} over charted position of observer. Insure relative bearing oriented to observer and a known reference.
NOTE:
Center of rings indicates the assumed surface position of the flare origin. Find the Latitude and Longitude from the chart. Describe the circle of equal probability by using the distance for the appropriate angle as the radius around the surface position.
Orient F_{min} over Observer
Scale: 1 Ring : 1.5 NM
Set scale to your local chart
Flare Altitude +/- 1000' Assumed.

Angle above Horizon	1°	2°	3°	4°	5°	6°	7°	8°
Distance in NM	8.9	4.6	3.1	2.3	1.9	1.6	1.3	1.2

customers can identify and understand. (What can I expect the CG to do if someone reports seeing my flare?)

Four Components to the FPRP

* Relative bearing azimuth. Comprised of six concentric circles around a center point and divided into 360 degrees. The ground position of flare (datum) and appropriate search area are plotted on it. The FPRP can then be used as an overlay to the appropriate chart.

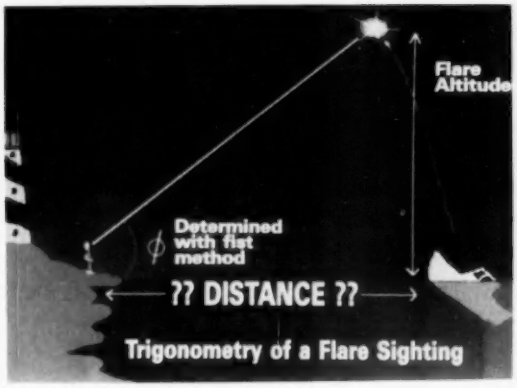
* Scale. Establish distance between concentric circles by measuring on the chart selected (i.e. one ring equals 1.5 NM on the latitude scale). Since the scale of the plot is in relation to the chart being used, copying or enlarging the plotter does not affect it's accuracy.

* Distance by vertical angle table. Extracted from Bowditch volume II, table 9. FPRP assumes a flare altitude of 1000 feet. SOLAS requirements dictate a parachute flare to obtain a height of 300 meters (approx. 990 ft). Pen gun/meteor flares have no minimum altitude requirements but average between 200–675 feet (Ref. table 2–26 CG Addendum to NSM).

* Instructions. Detailed instructions walk a planner through the steps required to use the FPRP. A generic example is also included (user defines observers position).

* Once a search area is developed, you must consider a plan of attack. Remember the Major Axis will be in the direction of Line of Bearing (LOB). This will be important when identifying search patterns to your SRU(s).

Consider selecting a Trackline Single–Unit Return/Trackline Multi–Unit Return (TSR/TMR), putting SRU(s) down the LOB(s). This insures you are looking in the highest probability area first. If that doesn't bear fruit then you need to select a pattern appropriate to the situation.



Factors to consider include:

* Accuracy of Datum. Was more than one LOB used? What is the experience level of your reporting source(s)?

* Passive searchers in area. Does your search area include high density traffic areas (i.e. approaches, traffic lanes)? Can the reporting source "vector" your SRU to Last Known Position?

* Total drift. Will the target drift away from your SRU before completion of the search area?

* Weather. Squall lines/fog approaching? From which direction?

If the area is searched with no positive results you need to REEVALUATE your information. Several things could be going on.

* Misinterpreted report. Are you searching in the wrong area? How accurate was the sources position? Was the sources judgement impaired (alcohol, drugs, mental deficiency)?

* Blunder made in planning. Did you pull the correct data from tables used? Are all required computations correct?

* Search plan correctly executed. Insure the SRU understood the plan and conducted it properly.

* Target changed. If information is correct and sighting is confirmed by more than one source, victim may be out of flares. If this is the case, consider employing Night Vision Goggles (NVGs, reduce track spacing, use aural (listening) techniques.

CONCLUSION

It's Coast Guard policy that unresolved red or orange flare sightings require a first light search. When planning such a search remember:

* Primary target is no longer a flare.

* Consider most likely target(s) based on investigation and drift, search area accordingly. Search initial area if possibility of anchoring exists.

* Extensiveness of daylight search will be based on ALL information gathered. Specific guidance should be provided by local Standard Operating Procedures (SOP).

The National SAR School currently uses the FPRP and endorses it as a method to rapidly identify a valid search area for a flare sighting. We are extremely interested in feedback from the field. Any comments on improving the plotter's performance as a planning tool can be directed to the Nat'l. SAR School at USCG RTC Yorktown Virginia, (804)-898-2381.

As with all Coast Guard operations don't let complacency defeat you before you begin. Proactive actions and good judgement will always prevail! *o/s*

Flare showers

By: LTJG Paul D. Lange, Airstation Elizabeth City

The solar system is a dirty place. Comets litter our orbit. They cast off one percent of their mass on every trip around the sun. These cosmic litterbugs strew the earth's path with dust and grit destined to become meteors. Mother earth sweeps through her orbit incinerating space dirt sixty miles above our heads. She does this inconspicuously during the day but makes a great show during the night shift.

On a cloudless night with good visibility you can look up and see the trail of five or six sporadic meteors every hour. When the earth passes through the debris of a comet, you are bathed in the glow of 100 meteors burning up every hour. Meteor showers are quite predictable, litterbug comets make up in punctuality what they lack in tidiness. We have ten major showers occurring on the same date every year.

Keeping with the universal policy of blaming litter on the nearest innocent bystander, meteor showers are named after the constellation where they appear to originate. Of course the constellation has nothing to do with the mess left behind a comet.

If you are like me and you enjoy watching litter get roasted, take a lawn chair down to an unlit beach, and look up. What does a meteor shower have to do with Coast Guard Search and Rescue operations?

My Coast Guard rescue helicopter was launched on the night of 20 October 1990 to search for the source of distress flares sighted near Piney Point, North Carolina. We searched for two hours but found no one in need of assistance. Coast Guard small boats continued to search through the night without success. The case was closed at first light. During the flight we saw meteors streak across the cloudless sky. Could the men and women reporting flares off shore be mistaking a meteor trail for a distress flare?

This final situation report from the SAR Mission Coordinator describes a meteor shower perfectly:

"received numerous calls via land line from different reporting sources stating that they had seen numerous white and orange flares approximately 1.5 to 6.0 nautical miles from the oceanside of Rodanthe to Nags Head, NC. Upon interviewing reporting sources the flares were not seen coming from waterline, only seen at high altitudes."

In the last four years a helicopter from Air Station Elizabeth City, NC has launched on a flare sighting case on or about the 21st of October three times. Could this be a coincidence? "Not!"

The Orionid meteor shower occurs every year during October 16–21 with the peak number of meteors flashing across the sky on 21 October. The interesting feature of the Orionid meteor shower for us near latitude 35 degrees is the position of the constellation Orion, low on the eastern horizon, two hours after sunset.

An observer on the coast of Virginia or North Carolina looking out to sea at 1930 local time can easily confuse the Orionid meteor shower as a flare shower from a vessel offshore in distress. If the third week of October has good visibility and clear skies then we can plan on a flare sighting case.

How does this information help Coast Guard watchstanders? We must respond to every call for help even if we suspect the source of a distress flare is really a meteor.

During the third week of October we can ask the reporting source these questions to determine whether a sighting is a distress flare or a meteor:

- Could the flare you saw be a Meteor?

- What color was the flare?

- Did you see the flare going up, coming down, making an arc, or burning a straight line across the sky?

- If you look at the area in the sky where you saw the flare, do you see more flares? The peak activity for the Orionid meteor shower is 20 per hour. You should continue to observe meteors coming from the constellation Orion.

- Is the sky overcast or clear? A cloudy night has

little chance of revealing a meteor shower.

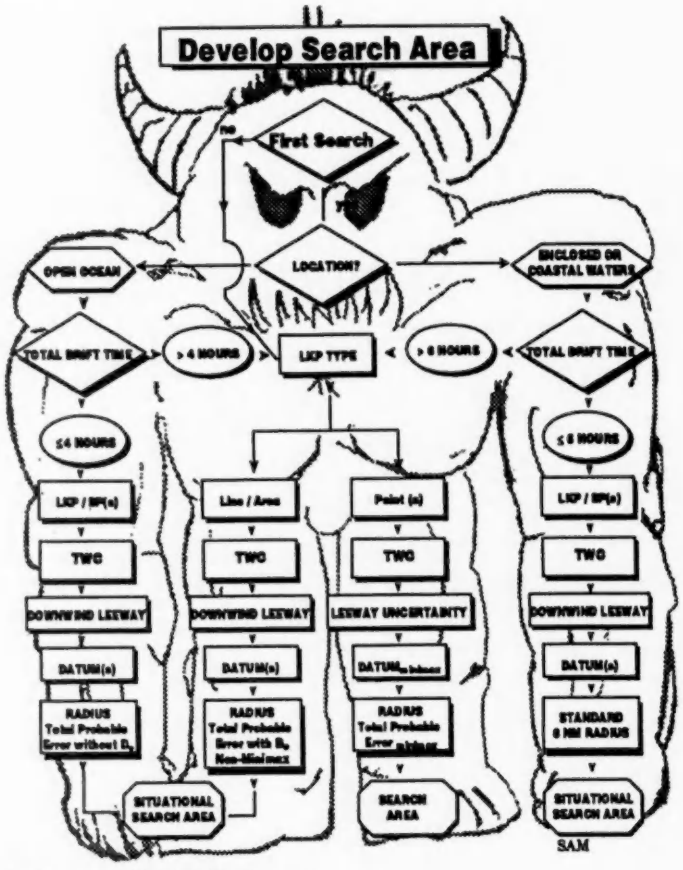
– Are flare sightings being reported along the entire eastern seaboard?

As a helicopter pilot I like flying. On a night clear enough to see a meteor shower, I want to be launched. I can watch the cosmic fireworks from the best seat in the house. When in doubt...launch the helicopter. *o/s*

The Most Impressive Annual Meteor Shower

NAME	DATE	PEAK NUMBER	AVERAGE/HOUR
Quandranids	January 1–6	January 3	80
Lyrids	April 19–24	April 22	15
Eta Aquarids	May 2–7	May 4	40
Scorpiids	April 28–May 12	April 28–May 12	20
Delta Aquarids	July 15–Aug 17	July 28	20
Perseids	July 27–Aug 17	Aug 12	75
Orionids	October 16–21	October 21	20
Taurids	Oct 26–Nov 25	November 4	12
Leonids	November 15–19	November 17	10
Geminids	December 7–15	December 14	60

Who Wrestles This Guy, Anyway?



SAM

By: QMC Bob Coster, National SAR School

When a SAR case proceeds past the initial Search and Rescue Unit (SRU) response, it's time to put a comprehensive search plan into action. As outlined in (para. 2. A. 1. E. PG. 2-1) of the Coast Guard Addendum to the National SAR Manual (COMDTINST M16130.2A), this planning phase should be conducted at the lowest practical level, but no lower than the responsible Group involved. Initial response policies in the Addendum apply to SRU's arriving on scene, if the target is not immediately located. Initial response actions of the SRU should provide complete coverage of a localized area around Last Known Position (LKP). The SRU estimates the drift from on scene conditions and conducts the initial search. This is not a comprehensive planning procedure. It is the SAR Mission Coordinator's (SMC) responsibility, usually at the Group or District OPCEN, to evaluate the situation, calculate a search area, and provide the Station/SRU with a comprehensive search action plan.

A systematic approach to developing a valid search area is key. The Search Planning Decision Matrix (SPDM, figure 2-0 from the Addendum) has been designed to guide the planner through the thought process, following Coast Guard policy. For those of you unfamiliar with this "animal," it is overlaid on the ogre above. The SPDM is a flow diagram. Several questions guide the planners to the "correct" search model:

* First search? Y/N - A second search and computation of Datum (initial actions of the SRU are not considered) defaults the planner to the center two columns, regardless of total drift time or location.

* Location? Open ocean or enclosed/coastal

waters. – Generally the demarkation would be 20–25 NM offshore or water depth >300 feet. Local SOP should specify where the cut will be for your AOR.

* Total Drift Time? A six–hour window exists for the enclosed /coastal waters. Open ocean planning relies on a four–hour window.

Datum is then calculated, accounting for the various environmental forces affecting your specific drift problem.

Total Probable Error is calculated by accounting for target position error, SRU navigation error, and possible drift errors. A Safety Factor is then applied to determine a search radius around Datum.

The majority of planned searches involve targets in the coastal regions with total drift periods less than six hours. Using this scenario you would follow the matrix down the right hand column.

Open ocean search area development (drift <4 hr.) and Coastal search area development (drift <6 hr.) do not account for drift errors. Desired Search Area Radius relies only on (1) the target's initial position error and (2) the SRU's ability to navigate, combined with the appropriate Safety Factor. The Coastal model uses a standard search area radius of 6 NM, while the Open Ocean model search area radius needs to be calculated (for further explanation see CG Addendum, para. 2. B. 6. and National SAR Manual, VOL. I, Section 520).

Considering the number of complicated factors, the development of a valid search area demands a watchstander who has received specialized training. Current policy relieves our multi–mission stations, air stations, and patrol boats of comprehensive planning responsibilities. Group, section, district, and area level operation centers have the distinct pleasure of wrestling the four–legged monster. *ols*

Get a Head Start

By: LCDR R. T. Wright, Group North Bend, OPS

Group North Bend, OR successfully held its first Boat Engineer "Head Start" course. The "Head Start" program included dedicated training in specific engineering subjects. The course, hosted by Station Umpqua River, became the third "Head Start" course conducted within the Group. A boat Coxswain course has also been completed.

The success of this program is due in great measure to the Chiefs and Petty Officers who devote their time to preparing detailed training guides and providing daily instruction. BM1 Meyrick, OPS of Station Umpqua River, put together the format for these courses, and was instrumental in making each of the "head start" courses a success.

The program starts by soliciting a volunteer unit capable of hosting 12 to 18 people. Also Group units provide MLB's for the one to two weeks that are scheduled for training. Each of the stations within Group North Bend identifies two students to attend the training, and an instructor to join a team of supervisors to monitor class progress. Students and instructors are temporarily assigned to the "Head Start" program to remove them from the distractions of day–to–day operations and duties at their home unit.

The short–term sacrifices are offset by the long–term benefits of having trained personnel available at all units in your Group. The level of qualification depends on the students' knowledge and experience prior to attending the course. The majority of students returned to their units prepared for unit training board reviews and qualifications. Station COs / OinCs have praised the program, noting a significant reduction in time spent in syllabus training. If you would like more information on Group North Bend's "Head Start" program, contact LT Rich Petherbridgeat (505) 756–9216. *ols*

SARSAT SYSTEM IN ACTION:

By: LTJG M. F. White, CCGD11

The SARSAT/COSPAS system continues to provide critical information for SAR assets worldwide. Rescue coordination centers (RCC) around the world rely on SARSAT information daily. Although many of the alerts are from non-distress situations, RCCs must respond to every one as if it was a known distress. On 4 October 1992, the system worked exactly as it was designed to, and two lives were saved. What follows is a brief chronology of the sinking of the F/V POMPANO off Eureka, CA.

David Tibbles and his friend/crewman Chad Benson were cleaning their catch after a morning of fishing for swordfish. Weather conditions had deteriorated through the morning and the northwesterly 35 Kt. wind was driving swells of 15-20 ft. rocking the 41 ft. boat violently as it motored slowly through the trough. At approximately 11:00 A.M., a wave of approximately 20 ft. broke over the boat, instantly swamping it. The following wave capsized the boat and washed the crew into the water. The crew had little time to do anything but grab a few precious pieces of survival gear; namely an exposure suit grabbed by the crewman, and the Class B EPIRB by the skipper. Their boat quickly sunk from sight. Soon thereafter the 4 man life raft canister bobbed to the surface and the life raft deployed automatically. Both crew members were able to board the raft and deploy its drogue.

At approximately 1:45 P.M., the 11th District Operations Center received a phone call from the FAA Center in Oakland CA, advising the Coast Guard that several commercial airliners reported hearing a faint ELT signal on 121.5 MHz. Due the high altitude of the aircraft and weak signal strength, it was possible to pin down the position to "Somewhere from 50-250 NM offshore from northern California." The RCC immediately contacted Naval Commands which routinely operate in that area. A Navy oiler had transited the area that morning, and reported hearing no signals on 121.5 or 243.0 MHz, they also confirmed that none of their beacons were energized. At approximately 2:15 P.M., RCC began to receive SARSAT First Alerts in the area reported by the controllers at Oakland Approach. The watch called USMCC in Suitland MD and requested a summary of Satellite "hits" in the area over the preceding four hours. This information was again inconclusive.

At 4:13 P.M. RCC Long Beach received a SARSAT composite position, at 40-46.3N, 125-51.7W, approximately 75 NM due west of Eureka. An HH-65A helicopter from Air Station Humboldt Bay was launched to locate the source of the beacon. At 5:25 P.M., the helicopter was forced to return to base due to a chip light in the tail-rotor gearbox. Ten minutes later, RCC received a second composite position, only three miles from the first. A second helo was airborne at 5:50 P.M. At 5:55 P.M., RCC received two more composite positions from the SARSAT system, again both were within three NM from the original position. At 6:20 P.M., the helicopter began to experience communication difficulties, and reported it's radar was inoperative. Air Station Sacramento was directed to launch a C-130 to conduct the search as it seemed that the second helicopter would also be forced to return to base. Shortly thereafter communications with the helicopter were lost.

As the helicopter approached to within 20 NM of the last position of the signal passed by Group Humboldt Bay, the direction finding equipment began to receive the unmistakable tone of an EPIRB. The signal indicated directly ahead of the aircraft. As the aircraft neared the position given, the aircrew was dismayed by the fact that there were no vessels in the area, the DF needle wavered and then began to rapidly move to the left, the Copilot searched the ocean out of his left-side window.

The crew in the raft had waited patiently, and when they began to hear a noise other than the wind, the master of the POMPANO looked outside and saw the approaching helicopter, he grabbed a hand-held flare from the raft's survival kit and ignited it at approximately 6:30 P.M.

"I've got something at nine-o'clock! A flare! And a raft!" was announced by the Copilot. The aircrew quickly deployed their rescue swimmer and hoisted the two men to safety. The rescue swimmer

recovered the EPIRB and survival suit, and scuttled the raft before being hoisted back aboard the helicopter. They quickly took action to treat their passengers for mild hypothermia and began transmitting their information in the blind to the group.

At 6:52 P.M., Group Humboldt Bay regained communications with the helicopter and confirmed that the two persons recovered from the water were indeed the only ones aboard the sunken vessel. The survivors were treated and released at Mad River Hospital for mild hypothermia. The crew of the F/V POMPANO had spent only 7 hours in their raft, and were in good health.

There is nothing spectacular in the above story, no herculean efforts were required by anyone involved in this case...mainly due to the fact that the critical elements of the SAR system were in place: the proper safety equipment, the knowledge to use it, and the SAR assets to respond to it. What is unique to this rescue is that from the moment the POMPANO was swamped, events unfolded exactly as they should have:

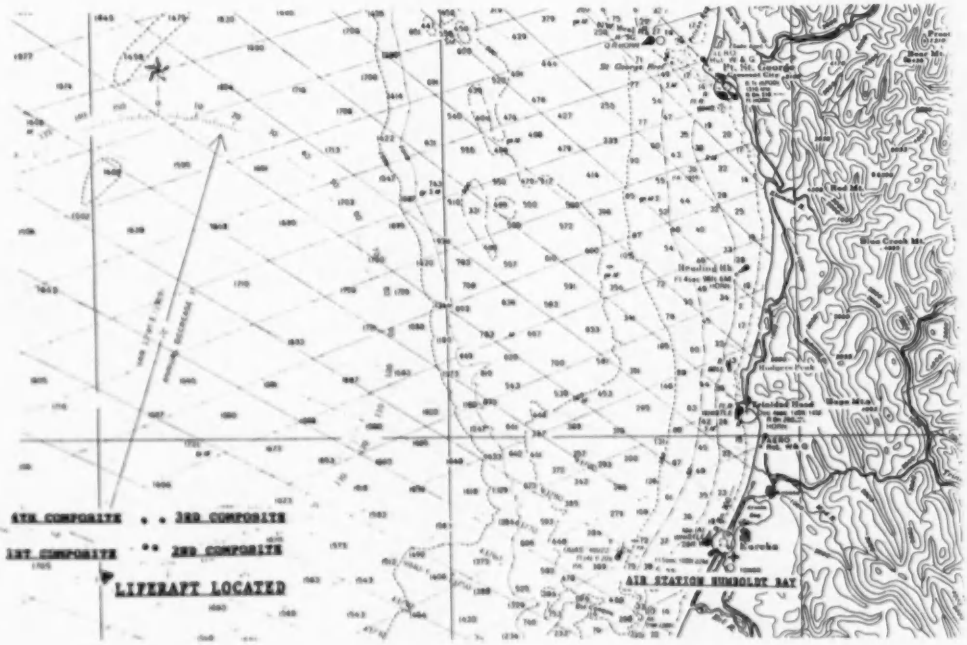
1) A clearheaded crew took with them essential equipment that undoubtedly saved their lives.

2) The vessel was equipped with a life raft that deployed correctly (as required by the Commercial Fishing Industry Vessel Safety Act).

3) The commercial aircraft transiting the area reported the faint signal to the FAA who in turn passed the information to the Coast Guard, again in accordance with their regulations.

4) The SARSAT system accurately determined the position of the beacon and transmitted it to the appropriate RCC.

The SARSAT system works, exactly as it was designed to, and when each element, from vessel owner to the rescue swimmer performs exactly as they should tragedies are avoided, and lives get saved. The regulations that have recently been implemented in the commercial fishing industry are definitely having the desired effect, how many 41 ft. fishing vessels had life rafts three years ago? Although Cat 1 EPIRBS (406 MHz) are required, don't give up on the 121.5 MHz EPIRBS, they still work well. *ob*



Above: Chart showing four SARSAT composite positions received.

A "Cheap" Assist

By: Mr. R. W. Rickel, USCGAUX

This past weekend I was the crew for the 19' Auxiliary Facility "FINLANDER" which was operated by Dick Johnson the owner. I have been in the Auxiliary for only two years and most of this time has been spent in training for boat crew and operator. We had just completed our pre-launch check-off and pulled out from the dock in the Black River at Coast Guard Station Lorain, OH. We noticed a small outboard motorboat stopped in the middle of the river about 150 yards downstream from the station.

There were two young adults aboard, when we first left the station, they were looking down towards the stern of the boat. As we got closer to them we observed the young lady point and say "Look there's a towboat!" Dick looked at me and said " This looks like a cheap tow job!" When we got close enough, I asked if they were in need of assistance. They replied that they were taking on a little water and asked if we could help them. I immediately asked them if they had life jackets. And the young man replied, "No, But we have this." He held up a throwable cushion.

Dick was in the process of radioing the station to tell them that we had a boat taking on water in the river when the boat started going down at the stern. The girl climbed up on the bow to try to get out of the water she was starting to look scared as the boat sank down further in the water. As Dick started to maneuver over to the boat to remove the girl, it sank. The girl slid off of the bow and was treading water. I yelled to Dick to throw her a life ring. The boy was now hanging onto the bow, the only part of the boat was above water. He wanted me to toss him a line to tie onto the bow of the boat to keep it afloat. I told him to swim away from the boat because I knew that we couldn't keep it afloat. I was concerned if it went down it may take him with it, either by the vacuum of it going down, or he could get tangled up in a line and be pulled down with it. Just as he swam away, the boat sank to the bottom of the Black River. The girl grabbed the life ring, and Dick pulled her in towards the boat. The boy swam to the boat using the throwable cushion and we took them on board. All of this happened in less than 2 minutes, within sight of the station and the 41' UTB which was moored in the river.

Is there such a thing as a "Cheap Assist" when on patrol under orders, or when you are just out boating for fun? If you stop to think about what you consider "easy" from the standpoint of many Auxiliary boat crews, it may be terrifying for the new or average boater. Considering the amount of training that we have to undergo to become qualified as either crew or operator, it really makes you think and act as one when the time comes.

This assist was "easy" from the standpoint of its location, but the consequences of a sinking boat are grave anywhere. This could have happened 5 miles out or right alongside a dock. Considering that no life jackets were on board, it could have been disastrous if this had happened anywhere else. Let me tell you, those kids were just as scared in the river as they would have been in the open lake. Any assist you render, however "cheap" or "easy" could become life threatening at any time. That is why we have been trained to react to situations instead of stopping to think about what we are going to do. It was fortunate that we were in the right place at the right time or this "cheap assist" could have had a different ending. ***ots***

Station Study Implementation Progress: SITREP TWO

By LCDR G. D. GARRETT, G-N-1

1. SITUATION

A. The Station Study Implementation Staff (G-N-1) is halfway through its two year life span. The team continues to work within CGHQ to turn recommendations into realities. Progress is good.

B. Many changes are being made that will impact stations and groups (in fact, all operational commands). The impact of some changes is already being felt. Impact of others will be felt over time. All changes will allow stations to focus on better serving our customer: the American public.

2. ACTION TAKEN (HIGHLIGHTS)

A. Station and Group Relevelling Plan. A Search and Rescue Division-directed team has completed a plan to better allocate scarce station personnel. In September, the group briefed the Commandant, then the Flag Conference. In mid-October, the final report was under review. Recommendations include:

* Use operational workload as a staffing basis--"busier" units get more billets.

* Increase the use of "subunits."

* Staff for 1:2 and 1:3 duty rotations, where low/moderate workloads allow.

* Upgrade a large number of non-rate billets.

* Provide a dedicated EPO billet at every station.

Initial actions are expected to begin with '93 assignments. If approved as proposed, the plan would be fully executed by FY 95. Efforts now focus on group office relevelling.

B. New Staffing Standards. New staffing standards will "pick-up" where relevelling "leaves off." Relevelling tries to do the best with available resources. New staffing standards will identify what is actually needed to do the job.

C. Unit Change Guide. The Search and Rescue Division (G-NRS) is working on a guide that will help ensure our units keep pace with changes in customer populations, mission emphasis, technology and resource improvements. The guide will set criteria for establishing, up-sizing, down-sizing or consolidating stations to meet actual demand in a particular area. It will take into account the capability of all operating facilities; including air stations and patrol boats.

D. Prototype Program. 19 of the study's more challenging, higher risk recommendations are being evaluated through prototyping to determine suitability for servicewide application. Prototype testing began this summer at Groups Astoria, OR, San Francisco, CA, Mobile, AL, Key West, FL, Cape May, NJ and Milwaukee, WI. We are conducting carefully structured, objective tests for each of the 19 recommendations. The prototype program should generate tangible, hard-hitting, results needed to act on our most "solution-resistant" problems. Test activity includes:

* Operations Information System (Group Long Island Sound). Eleven frontline operators from around the service are working with the R&D Center to combine operational reports and to improve group/station command and control. Operational testing will begin in the spring.

* Improvements in Reserve support (Groups Cape May, Mobile, Milwaukee, and San Francisco)

* Improvements in training, mission performance, command and control & maintenance and reduction in administrative overhead (all sites). These include:

* Pre-Arrival Training - Eighteen Reserve UTB Coxswain/Crew member quotas were reprogrammed for prototype station use. This simulated pre-arrival training with excellent results. We expect more test training opportunities.

--MSTs at Stations - Five MSTs will be assigned to five prototype stations within the next few months.

--Station OOD/COMMS Watches - Prototypes will try to responsibly close the gap between policy and practice.

--Reduce administrative overhead - Two tests groups have implemented central financial accounting. One group's stations have SKs assigned. All prototypes will try reduce administrative overhead. Standard measures will gauge effort saved and benefits realized.

E. SBSSS Dictionary of Activities Survey. This survey measures how and where station personnel are employed. The survey was done in March and September '91, and again in September '92 to monitor study implementation impact. 77 units participated. We will administer the survey annually for the next few years.

F. Regaining Control of Tasking. The Directives System Manual sets rules for issuing directives, a major source of tasking. A revised manual awaits final Headquarters approval. The manual is expected to have several new provisions to limit indiscriminate tasking, including:

* Facility manager clearance for all new unit tasking.

* Impact assessment by the directive originator.

* Limiting direct CGHQ tasking to no lower than the group level.

* "Action" paragraphs that are specific to the affected level of command (vice "All COs shall").

* Guidance for CGHQ conflict resolution.

A Quality Action Team (QAT) is reviewing facility management within the Office of Navigation (G-N), including strengthened station advocacy.

H. Personnel.

* A recent Personnel Manual change no longer charges "A" school attendees against unit allowance.

* Enlisted Personnel Division formed QATs to develop revised Junior and Senior Enlisted Assignment Policies (JEAP and SEAP). Both policies should make "transfer due to promotion" the exception rather than the rule. This will significantly reduce unit turnover. These changes are expected this winter and should govern FY 93 transfers.

* G-N developed a position paper which outlined problems and made specific recommendations on color vision-deficient personnel. Several policy revisions are expected. PMIS tracking of these people should occur by March '93.

I. Training.

* G-NRS continues work with Performance Systems Division (G-PRF) and Recruit Training Center to refine recruit training to better address qualifications. Small arms training is scheduled earlier to allow more time to qualify more recruits.

* A recent audit report identified training as a "significant improvement opportunity." The Commandant has directed a full review of training practices by mid-93. Efforts continue to develop a cohesive staffing/training/assignment philosophy for stations.

* A CCGD13 report gave valuable input on several training initiatives.

* We are working with several organizations (in and out of the CG) to identify increased use of videos for training.

* G-PRF plans FY 93 schools so more quotas are available to station personnel in the "off-season" (when SAR demands are lower).

J. Reducing Administrative Overhead. Over 100 actions were taken by CGHQ, Areas, and Groups to reduce administrative overhead. Some examples:

* Centralized accounting initiatives have saved XPOs up to 1 man-day per week and improved quality of records without adding significant Group workload. The Ninth District plans to expand the practice.

* Spurred by D5 and D9 initiatives, requirements for operational commands to maintain PDRs will be deleted.

* The latest Directives, Publications, and Reports Indexes (DPRI) significantly reduced the number of station-held publications. D5 recommended more deletions. The next DPRI revisions will reflect this.

* MLC Compliance checklists were a base for a station administration requirements review. Thirty-four areas (personal property accounting, urinalysis, etc.) are identified for simplification or deletion. All have been initially addressed in HQ. Progress is excellent.

* A Headquarters Reports QAT has been formed to look at current requirements, why the information is needed and how it's used, and to identify better ways to obtain and process the information.

* G-N-1 is developing a Station Standard Organization Manual to consolidate "boiler plate" documentation requirements, share the best of the best, and generally save reinventing the wheel. A draft manual has been passed to some prototype units for review.

K. Group Workload Study. This G-N study, reported 16 recommendations based primarily on a survey of group and district personnel. Copies will be out during the first quarter FY 93. G-N-1 is tasked to coordinate/facilitate implementing recommendations. A G-NRS/N-1 group relevelling effort, has been looking at many of the issues since JAN 92. An Office of Engineering and Development (G-E) working group on group/station maintenance has been at work since June '92. Group relevelling efforts will follow a process much like station relevelling efforts, with the results leading to new staffing standards. Operational commander involvement will be essential.

3. G-N-1 FUTURE PLANS:

A. Proceed to achieve highest impact improvements.

B. Keep customer focus (group/station/public).

C. Document efforts so any remaining work can be effectively carried on by a strengthened facility manager.

D. Continue/encourage dialogue at all levels. *o/s*

STATION STUDY IMPLEMENTATION TEAM

NAME E-MAIL POSITION	PHONE/VOICE MAIL	
CAPT G KETCHEN/G-N-1	Chief, Implementation Staff	(202) 267-0708
CDR R TINSMAN/G-N-1	Assistant Chief	267-6710
LCDR G GARRETT/G-N-1	Staffing Standards, Prototype Unit Program, Relevelling	267-6101
LT G JOHNSON/G-N-1	Career Path, ADMIN Tasking, Personnel, Maintenance	267-6100
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* * * *

UPDATE : 1993 SAR Conference

By: Ms. Paula Batt, G-NRS-1

The following is the latest information on the Senior Controller and OSR SAR Conferences sponsored by G-NRS for 1993:

The Senior Controller Conference will be held at Operations Systems Center (OSC) Martinsburg, West Virginia on 15-16 April 1993. The conference will be held in conjunction with an AMVER/CASP workshop scheduled for earlier the same week (12-14 April). The purpose of the controller conference is to provide a forum for information exchange, regarding SAR related topics and to discuss several unresolved SAR planning matters. Attendees for both the conference and workshop are the senior controller or their representative from each district, area, GANTSEC, and MARSEC. Attendees are encouraged to submit possible agenda items. POC for the controller conference is Mrs. Paula Batt, G-NRS-1, (202) 267-2869, E-Mail P.Batt/G-NRS.

The OSR Conference will be held in the May/June timeframe. The conference site has not yet been determined. Attendees are district OSR's or a OSR's representative from each area. *o/s*

Que Pasa en Centroamerica?

By: LCDR D. Edwards, G-NRS-3

In mid-1991 the International Civil Aviation Organization (ICAO) requested Coast Guard assistance in implementing a SAR system for Central America. The six states of Belize, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua were considering a regional approach to SAR. The stage was set by the 1989 ICAO-sponsored meeting for the Caribbean - South American regions. Central America had taken tentative steps to implement SAR recommendations from this meeting, but nothing concrete was established. With regional cooperation growing, ICAO wanted to keep momentum going for SAR and called upon the Coast Guard. The focus of the Project was to establish a reliable regional SAR system where one did not exist. An additional benefit was the opportunity to better harmonize international SAR procedures between the aeronautical (ICAO) and the maritime (International Maritime Organization (IMO)) communities. Specific tasks included:

a. Assist the Central American Corporation for Air Navigation Services (COCESNA) in implementation of a Central American Rescue Coordination Center (RCC) in Tegucigalpa, Honduras, (Headquarters of COCESNA, a well established, state supported regional authority).

b. Assist with detailed plans for SAR services in Central America.

c. Help develop necessary SAR agreements between the states.

d. Visit Rescue Sub-Centers (RSCs) of the states to verify SAR Plan continuity and compatibility.

The Project used a team approach, one member devoted full-time to the project while the Chief of SAR Division's Liaison & Coordination Branch (G-NRS-3) provided assistance when other commitments would allow. The full-time member was under contract by and represented ICAO as the SAR expert. (Travel costs of per diem and transportation for this member were paid by ICAO.) The Project was broken into 3 phases: (1) visit the ICAO Regional Office and COCESNA headquarters to develop baseline capabilities and needs; (2) visit each state for on-site inspection, information gathering, and verification of SAR Plan continuity and compatibility; (3) consult with the ICAO Regional Office and write a comprehensive report.

The Project was completed in late 1992. Results included:

a. A well-documented SAR Plan for the region, which is envisioned to be signed by COCESNA and the six states concerned to form the basic framework for implementation of an effective international SAR system within Central America;

b. A proposed charter for an international (regional) SAR committee for Central America to help the region
* ensure implementation.
* exchange information
* develop strategies and detailed plans.
* resolve problems.
* provide a forum for discussion of matters of interest to multiple states or organizations within the region.
* Identify new areas of work to improve the SAR system; carry out additional work recommended by this Project.
* coordinate SAR efforts within the region and enhance cooperation for that purpose.

c. A proposed comprehensive SAR Manual for Central America based upon the ICAO SAR Manual (balanced with specific details from the IMO and our National SAR Manuals) and the needs and capabilities of the entities involved.

d. A set of guidelines for development of Plans of Operation for the Central American

RCC and for the Rescue Sub-Centers of the six states.

A cornerstone for the success of this Project was establishing the process to implement recommendations and for continuous improvement of their SAR system. This was attained through acceptance of the SAR Plan and the creation of regional and national SAR committees.

Present intentions are for RCC Centroamerica and its associated SAR region (SRR) to be activated 1 April 1993. COCESNA's position of SAR Director (at its headquarters, collocated with the RCC) is filled by Guillermo Aguilar Acosta, telephone (504) 331141, fax (504) 331219. The COSPAS-SARSAT organization and COCESNA are already exchanging information in anticipation of pending RCC activation. Efforts are underway to have the National SAR School conduct a mobile training team course and train a cadre of SAR instructors at their regional training facility in El Salvador.

G-NRS-3 continues to have active SAR discussions with the COCESNA SAR Director. Thought is being directed at how to merge RCC Centroamerica in with U.S. RCCs, e.g. Miami, Long Beach and Howard AFB in Panama. RCC-to-RCC informal contact is encouraged with the understanding that the roles of SAR Director and SAR in general, are both still evolving. We will work with all parties concerned for the smooth on scene entrance of the new RCC.

Though not part of the project, we would be remiss not to note the high regard in which the U.S. is held throughout Central America. While we were well received by all levels within the six states and COCESNA, including Directors of Civil Aviation, SAR authorities, RCCs, etc., one example, among others, is noteworthy for the Coast Guard. The naval commander in Punta Arenas, Costa Rica, was highly appreciative of the training and support provided in a port call by CGC ACTIVE. Central America is anxious to measure up to its international SAR responsibilities and the Coast Guard can serve a leading role. *o/s*

In Memory of...

Captain John "Muddy" Waters Jr. USCG (Ret.) crossed the bar on 28 August 1992 after a long and courageous battle with cancer. Captain Waters is survived by his wife Jean Waters of Orange Park FL.; daughter, Sandy Waters an attorney in Denver, Colorado; son, Dr. Stephen Waters of Gainesville, Florida; and 10 grandchildren.

Captain Waters graduated N.C. State University, the Coast Guard Academy, and later completed graduate studies at the University of Miami. After graduation from the Coast Guard Academy in 1942 Captain Waters saw action in most maritime theaters of World War II. Captain Waters served on four ships during WWII, two of which he commanded, as well as leading a destroyer group. His first military assignment, as a gunnery officer, was served aboard the USCGC INGHAM. The INGHAM sank the German Submarine U626, the first enemy vessel sunk by the U. S. in WWII. Captain Waters was also decorated for a launching small boat during a winter storm in the North Atlantic, rescuing U.S. troops, after the transport HENRY MALLORY sunk.

After WWII, Captain Waters attended flight school then went on to command two air stations. Captain Waters is known for his pioneering work in Search and Rescue and Aviation Flight Safety. Known as a "visionary" for new training methods, Captain Waters conceived and obtained funding for a National SAR School located in Yorktown, VA which trains both U.S. and foreign SAR Personnel.

Having participated in over 5000 SAR missions, Captain Waters became internationally recognized as an authority on Emergency Operations. Captain Waters headed the Headquarters SAR Division, and then the Aviation Division, developing many of the standard procedures now used in Air/Sea SAR. Captain Waters wrote several books throughout his career. BLOODY WINTER, documented the USCG's role against the German U-Boat campaign in the Atlantic during 1942-1943. Other literary accomplishments are, RESCUE AT SEA, AIRCRAFT EMERGENCY PROCEDURES OVER WATER, and the first NATIONAL SEARCH AND RESCUE MANUAL.

In 1968 Captain Waters retired from the Coast Guard and became the director of Public Safety in Jacksonville Florida for eleven years. Captain Waters had been appointed a clinical professor at the University of Florida, School of Medicine and a member of President Gerald Ford's committee on Emergency Medical Services.

In 1979 Captain Waters retired to work as a consultant, continue writing, and spend time on his yacht. In 1984, Captain Waters was elected the first president of the USCGC INGHAM Association, and became a driving force to persuade congress to preserve INGHAM as a floating museum. Devoting much of his own time and private funds designing and constructing the floating museum, it is now part of the Patriots Point Naval and Maritime Museum in Charleston, SC.

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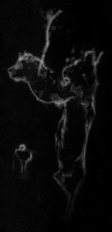
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